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THE HUMANIZING OF STUDY[1]

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Whatever the occasion and whatever our theme, we are sure to find a point of departure in the vast treasure-house of Robert Browning. Tonight we begin with part of his poem called "Development:"

> My father was a scholar and knew Greek.
> When I was five years old I asked him once:
> "What do you read about?"
> "The siege of Troy."
> "What is a siege and what is Troy?"
> Whereat
> He piled up chairs and tables for a town,
> Set me atop for Priam, called our cat
> Helen, enticed away from home he said
> By wicked Paris, who couched somewhere close,
> Coward puss. . . . .
> This taught me who was who and what was what;
> So far I rightly understood the case
> At five years old; a huge delight it proved,
> And still proves—thanks to that instructor sage,
> My father, who knew better than turn straight
> Learning's full flare on young-eyed ignorance.

In these few lines we have interest, effort, apperception, correlation, concentration, and all the other processes and principles which

[1] Read before the New England Association of Colleges and Preparatory Schools, at Boston, Mass., October 11, 12, 1907.

have become the shibboleths of modern education. But we have them embodied in a father instead of a pedagogue, who made the living room a schoolroom, used chairs and tables instead of pictures and casts, and gave the growing boy not paradigms and conjugations, but a lifelong "huge delight."

This simple natural way of imbibing knowledge and enthusiasm from a father or a friend is of course the ideal of education. In the Republic of Plato the father who wishes Socrates to instruct his sons simply says: "Please let these young men have the benefit of your society." In modern England some of the greatest minds like Mill, Ruskin, Spencer have thus been educated mainly through the home, and have owed little to formal school training. There is something artificial and unreal in the very idea of the school. The school is a group of young people withdrawn from the natural grouping of the family and the community, and fashioned into a necessary but artificial grouping according to age and ability. The schoolhouse is an unnatural structure which an ideal society would not possess. "I saw no temple therein" is the apocalyptic description of the heavenly city. With equal justice the writer might have said: "I saw no school therein." In ancient Athens education apparently involved a going to school in earlier years, but the greater part of education was by conversation and discussion in the open air. One of the most hopeful signs of our times is that we are beginning to recover the Greek ideal and through nature study, athletic sports, and summer schools are beginning to see that no hygienic schoolhouse can be any true substitute for "God's great outdoors."

But study itself, wherever pursued, has a constant tendency to become abstract and inhuman. It inevitably involves a temporary withdrawal from reality, and a segregation of certain parts of experience.

The formulas of mathematics, so essential to all exact investigation, are mental constructions in a purely hypothetical world. It is only in Euclid and his followers that the three angles of a triangle are equal to two right angles. Actually no surveyor has ever found them so in any piece of ground. Hence the purely mathematical mind is notoriously unfitted for grappling with events and objects in daily life, and mathematical reasoning affords no guidance whatever in the drawing of social and moral inferences, or ascertaining truths in the realm of the contingent and the probable. "The

mathematical spirit" said Fouillée, "is the art of seeing only one side of a question."

The division of the materials of physical study into different sciences is necessary but unfortunate. In the real forest there is no division into fauna and flora, into geology, botany, and ornithology. These artificial divisions we impose for the purpose of study, just as the anatomist dissects out a single nerve in order to understand it. But he is in constant danger of seeing only the nerve and forgetting its union with the body.

All propositions, formulas, expositions, are attempts to express the ever baffling reality in terms of intellect. But in all ages, the perfunctory teacher and the stupid pupil never get beyond the intellectual expression, the juiceless formula. In all ages the multitude have received the formula as a finality and so education has sometimes closed their minds and deadened their spirits. How often this was the result of the scholastic education of the middle ages we all know. The schools were as Comenius called them, "the slaughter houses of children." Scholasticism exhausted itself in laborious subtleties, and its boasted scholarship, removed from any study of facts was a castle in the air. The old trivium and quadrivium whetted indeed the reasoning faculty, but gave no material on which to employ it. Disdaining studies which might ameliorate the life of the common people, the mediaeval teacher endlessly discussed the interior structure of the Paradise, or the number of angels that might stand on a needle's point.

The revival of learning, the sudden efflorescence of classical study, swept away the old scholastic rubbish and filled the universities with a superb enthusiasum. "Bliss was it in that dawn to be alive." Into the stagnation that had gathered around school and church came the great impulses and aspirations of the age of Pericles and the reign of Augustus with transforming power. To commune with Homer, Plato, Virgil, Cicero, was to experience a rebirth. The intellectual life of Europe was recreated by classical study and that impulse has endured to the present day.

But have the classics always thus been the bearers of sweetness and light in the last 400 years? Let the millions of schoolboys who have been compelled to grind in the prison-house answer. For many of these millions, syntax and prosody have made acquaintance with the Greeks and Romans impossible; for millions of students Virgil has been merely a series of illustrations of the lexicon, and

Cicero an obliging commentator on Harkness' *Latin Grammar*. The decadence of the Greek language as an instrument of culture today is not wholly due to the encroachment of more modern studies. It is in part the Nemesis of devitalized instruction, the inevitable result of degrading the most luminous writings of the ancient world into mere engines of formal discipline. "We have murdered to dissect." We have "parsed" Caesar and Xenophon until they are no longer living spirits to our boys, but are mummies dessicated and horrible. In our higher schools classical philology is frequently as technical as any course in "chipping and filing," and much farther removed from genuine human interest.

Now our best classical teachers are making strenuous and successful efforts to humanize the study of Latin and Greek. They are refusing to observe the so-called golden rule: "Teach unto others as others taught unto you." They are bringing students into contact with coins and marbles and inscriptions and all the utensils of a buried life. They are transferring the methods of the scientific laboratory to the classical seminar. They are carrying their advanced pupils to Athens and to Rome. They are using the language as a mere channel through which to reach the national or racial life. In spite of the inhuman college entrance examinations which inevitably tend to depress every secondary school into a cramming machine, our best teachers are really giving our boys and girls a glimpse of the ancient spirit and ideal. But that glimpse must be made possible for students in non-classical courses. One of our most pressing needs is to make clear to non-classical minds the great inheritance that has come to us from Greece and Rome, just as we have made the literary and religious bequest of Israel known to millions who are innocent of Hebrew.

So in the modern languages we are reaching out for better and more inspiring methods of instruction. Perhaps the heaviest responsibilities in modern education rest upon the teachers of English and French and German, since the training in coherent thinking, careful discrimination, and precise expression which was formerely gained by study of the classics, is now largely transferred to departments of modern language. But our teaching of English not only is ineffective, it is positively destructive of real appreciation of the treasures of our English tongue. Happily the amount of time spent on technical grammar has been diminished, and teachers of rhetoric have more "bowels" than once they had. But the daily

theme writing, often forcing students to talk when they have nothing to say, seeming to affirm that quantity of output somehow leads to quality of style, and substituting the blue pencil for the living voice, has in some institutions become a mechanical and soulless routine. The study of the masterpieces of our English tongue often leads, as we all know, to an aversion in the mind of the student which lasts throughout life. Our college graduates are frequently illiterate and unshamed. The elaborate mechanism of instruction that we have built up in the American college does not create the thing most needed—sincere admiration and lasting delight. Our English speech is mastered by Oxford graduates without any of our years of painful and vexatious drill. Of course Oxford is dealing with a different class of students, selected from the finest English homes, with centuries of culture behind them, while we are dealing with a great democracy, many of them from homes where good English was never spoken. But our trouble lies not only with the sons of artisans and immigrants, but with the sons of the refined and educated. We are graduating men who not only cannot write a decent letter, but who take no pleasure in any literature beyond the flotsam and jetsam of the newsstand. Oxford has no entrance examination in English nor any courses in English required after entrance. When I said to a professor in Balliol College: "How then do you teach English here?" he answered, "Your American departments of English are killing the love of the mother tongue; we believe that good English, like good manners, is acquired simply by associating with those who already possess it." I know that the small group of men in an English college presents an essentially different problem from a freshman class of from three to five hundred, where the theme and the blue pencil and the fortnightly and the forensics and fifteen minutes of forced consultation are all parts of an apparently necessary but highly impersonal apparatus. But is it surprising that the elaborate schedule, the large force of clerks and assistants, the "theme readers" whose deadening task it is to correct the speech of hundreds of students they are forbidden to see or hear—is it surprising that all this cumbrous mechanism fails to kindle intellectual fire? "How can you bear," said one college senior recently when urged to write for a college daily, "how can you bear to push a pen over sheets of paper when you don't have to?"

I firmly believe that Oxford is right—good English is mainly

the result of association with those who have it. It comes by contagion and not by drill. We learn to talk well, just as we learn to talk at all, by listening. Good English is a part of courtesy and honor and chivalry. It is not conformity to rules in a textbook; it is conformity to the gentlest and noblest spirits around us and before us. It is the manner in which the best men and women approach one another for intellectual and social exchange. If such men and women prefer the split infinitive, then the split infinitive is right; if they abhor it, it is wrong. If they want reformed spelling, then we should have it; if they don't want it for a century to come, good breeding will keep us from attacking their usage. To spend four years in association with a group of men who delight in the English tongue and daily exemplify its varied powers, is the best possible course in "college English."

Many of our teachers are questioning the effect of our constant approach to English masterpieces by the method of the dissecting table. When the unresisting "masterpiece" is laid out before the class, and they pick out one filament after another, when they have determined the origin of every historical and mythological and geographical allusion, do they, as a result, love the "masterpiece" or hate it? Are their imaginations kindled, their spirits "stabbed awake," and the fountains of delight unsealed? Or do they view the poem or essay as a cadaver which they were driven to carve and rend? Professor Nettleton, who has recently written strongly—none too strongly—out of his own large experience, quotes the student who told the story of his English course as follows: "We took Milton line by line, and the teacher explained away every illusion." But is it necessary to explain away in order to communicate the thrill of genuine delight? Is it necessary to apply spectrum analysis to every star before we can understand Jessica's cry

> There's not the smallest orb that thou beholdest,
> But in his motion like an angel sings?

The trouble is that appreciation is difficult to communicate in formal lectures, while knowledge is easily packed into 50-minute periods. Therefore we impart the unimportant knowledge, and the glow of feeling, the flesh of insight, the illumination of the world which comes at the touch of Shakespere or Keats or Tennyson—that we seem to resign all hope of giving away. Thus we tithe

mint, anise, and cumin, and pass over the things that make men live.

Ever since I was a child my imagination has been dominated by the three sonorous lines of Milton:

> High on a throne of royal state,
> That far outshone the wealth of Ormus or of Ind,
> . . . . Satan exalted sat.

Whenever I have come face to face with the audacity and insolence of evil, whenever I have seen villainy assuming regal airs and powers, I have remembered the great Miltonic figure in his arrogant magnificence. Yet—must I confess my ignorance before this company?—I have an extremely hazy idea of the meaning of "Ormus." Was it mountain or river or province? To confess still further my abject condition, I have no particular desire for further information regarding Ormus, feeling dubious whether I could long retain such information if I had it. I know that Milton chose the word because it is a musical, mouth filling syllable, whose vowels make rich harmony with those that go before and after in the sounding line; and to feel the marching meter and be permanently enriched by the vision of demoniac defiance is more to me than to know the latitude and longitude of Ormus, or the population of its capital.

When we read *Romola* or *Ivanhoe,* we are not seeking knowledge and should frankly admit it. Our entrance examinations treat the literature of power as if it were the literature of knowledge, and seem to hope that callow youth by picking it to pieces will learn its secret. A report from the weather bureau may indeed be treated in this way. It may tell us that an area of low barometric pressure is moving eastward from the Mississippi and that the wind is blowing at 45 miles an hour. The same kind of storm is described in Ps. 29—but how differently! "The voice of the Lord breaketh the cedars of Lebanon, and strippeth the forests bare, and in his temple everyone is crying 'Glory.'" The latter description is far nearer the facts than the former, for it is qualitative, while the report of the weather bureau is purely quantitative, excluding all reference to the world of spirit. The weather bureau rightly deals with causes and effects, and excludes motive, purpose and ideal. Yet it is in the realm of motive, purpose and ideal that man finds himself, and achieves his great service to the world. Unless litera-

ture is to sink to the level of a barometric chart, it must be dealt with in school and college as primarily a source of insight, passion and power. The only way to feel that power is vitally to touch the man who already feels it. Here the only possible education is by contagion.

But the same necessity appears in other departments of study. Recently I asked a brilliant young college woman, just finishing her junior year in college, what study she enjoyed most. She readily answered "Psychology," and I was delighted at her obvious philosophic bent. "What part of psychology did you most enjoy?" I continued. With equal readiness she answered: "Altogether the most interesting part of our psychology was studying the space-sensations of mud turtles." Now we all recognize the profound service of comparative psychology; we are glad of the objective methods which supplement the old introspection. But if to our students the central problems of psychology are not in the region of human attention, habit, volition, emotion, but are in the movements and sensations of reptiles, are we not again dehumanizing our study? Such study at least should be dissociated from philosophy and induced frankly to own its closer kinship with physics, physiology, and zoölogy.

In history most of us were put through a discipline that produced a stinging resentment which still rankles within. In the best New England schools of thirty years ago we recited in concert long lists of meaningless dates, or memorized a textbook which was in itself a lifeless manual. Happily this has now changed. The dates have largely fled to the margin or the appendix, and the drum and trumpet story has given place to biography and the tracing of the development of homes and occupations and institutions. History has been humanized in the public schools—but not yet in the universities. There the dominant school of thought is never weary of objurgation of Gibbon and Macaulay and Froude and Carlyle, while the analysts are at the front demanding that human interest should be banished in the name of scientific method. After listening to many a historical lecture we turn with grim satisfaction to the statement of Frederic Harrison: "It is certainly not true that a knowledge of facts merely as facts is desirable. Facts are infinite, and it is not the millionth part of them that is worth knowing. What some people call the pure love of truth means only pure love of intellectual fussiness."

In the study of physical and natural science we surely should be in touch with reality. In the nature study now so popular lies deep culture value. To get close to nature is to acquire not merely knowledge, not only physical health, but sanity and poise and patience, and sense of law and order and beauty. The introduction of scientific study has revolutionized education and produced a type of mind wholly opposed to the type produced by the scholastic discipline or on classical study. The intellectual texture of a Tyndall or a Huxley is distinctly different from that of a Newman or a Gladstone. Science has given to the modern world a new sense of the value of truth, has turned man's eyes outward from himself, has made him master of his physical environment. It has taught us to observe closely, classify logically, and has exalted that inductive reasoning by which men must always guide their daily life.

But must we not confess that here also a certain inhumanity has crept into the work of both teacher and pupil? Have we not attempted to cram into textbooks for little children an entire scientific system? Is not the child frequently lost in a maze of definition and classification? In my early days the school geography began with definitions of the ecliptic and the equator. Then we advanced to the western hemisphere; a little later to the continent of North America. Then we learned the states of the Union and how to bound them. Then we studied the New England states and were just about to take up the part of Massachusetts where we lived when the summer vacation came and we had no time to become acquainted with our own home. A friend of mine who was put through the same method lived as a boy beside a small stream. In the spring it overflowed and a little tongue of land projected into it. Suddenly it flashed upon him that that little piece of land corresponded to what was called in the school geography a "peninsula," and which he supposed existed only in books. He ran into the house with all the joy of discovery, crying: "I have found it; I have found a real peninsula!"

Such things are improbable today. The sand maps and reliefs and outdoor expeditions have correlated geography to the daily vital experience. But still our textbooks err in crowding the university outlook upon the primary school. As Mr. McMurry says: "The strong tendency of textbooks in natural science to be systematic (i. e., to give the outlines of a system) almost completely

destroys their value for the common school." Endless analysis cannot feed the growing mind of the child. Too much technic at an early age is not uncommon. The story of the plant life is vastly more important to the child than its classification. Real study of nature must not fail to touch the emotions, to refine the taste, and unconsciously feed social and moral impulse.

In the higher schools and colleges the same danger is present. Usually a course in science totally neglects the history of the development of human knowledge in that department. It has not time for the biographies or achievements of Linnaeus or Faraday or Pasteur. It disdains any general view of the subject, as necessarily superficial. It often forces a crude student into extreme specialization, and sets him grubbing in remote corners of the subject where large horizons are quite impossible. From such research all social and ethical inspirations are excluded as an *ignis fatuus,* and the mind may move with an arid and rigid precision which is either more or less than human. Such a mind is typified in Browning's grammarian, who

> Could define the enclitic *de*
> Dead from the waist down.

Now what do we need? It is not pleasant to play the part of Cassandra, still less that of Thersites. But it is necessary at times to bring out in clear relief the abuse of studies we all honor and prize—since "the corruption of the best is always the worst." What do we need to make study more genial, more representative of man's entire nature, more truly human?

First, we need to emphasize the world of appreciation as well as the world of fact. The realm of reason and purpose, of character and volition, of aspiration and resolve, is for all of us far more real than the world of cause and effect, of force and formula, of materials and things. The world of ideals and qualities means far more in human life than the world of substance and quantity. The feelings are in the evolution of the race far older than the intellect and more powerful. To respond to the beautiful, the good, the true, instantly, decisively, permanently, to be at home with all noble utterance and achievement, to feel the suasion of great souls and have fellowship with them, is far more than to heap up any facts or classify any objects.

Here Greek education was peculiarly efficient. It is our standing

wonder that the Greeks, having so little to teach with, could teach so well. They had no foreign languages, ancient or modern, no sicence as we understand it, no history save their own, only elementary mathematics, literature, music, and physical training, and yet they fashioned men we cannot surpass. Their education was largely in the realm of appreciation, it dealt with the social, ethical, political, artistic, and it produced marvelous men.

Second, I need not say to an assembly like this that we must in education address the executive as well as the thinking powers. Manual training is distinctly humanizing, in that it restores the union of hand and brain which should never have been put asunder. Teaching a child to work with his hands is surely one of the humanities; it unites again intellect with feeling and action. The farmer's boy of 50 years ago did not suffer from the intellectualization of study, because three-fourths of his training was in action. President Hall has traced 70 different trades or occupations that were practiced on an old New England farm, and in most of these the boy had some part. The district school might be poor enough, but the farm life was rich in materials for producing vigorous, versatile, self-reliant manhood. Now to the city boy we are trying to restore the lost materials of social and moral education. Precisely those qualities which the New Englander derived from the mastery of his stony hillsides, and the Virginian derived from raising stock or cultivating his plantations, those are the qualities which somehow must be given in and through the modern school. "The subjects taught in the country schools" says Professor Bailey of Cornell, "are not the essentials. The school does not represent or express the community. I do not know that any schools teach the essentials except as incidents and additions here and there, and essentials cannot be taught incidentally or accidentally. Arithmetic and like studies are not essentials, but means of getting at or expressing the essentials. The first efforts of the school should be to teach persons how to live."

Third, we must regard all knowledge as the product and servant of the spirit of man. Things are of value just in proportion as they have spiritual uses and are shot through with meaning. Every study may thus be viewed from the human standpoint. Geology may sink to the level of the study of paving stones, or it may rise to an explanation of the migration of nations and the development of races. Botany may be made a mere wearisome analysis and chasing

of Latin names through a book, or it may minister to art and agriculture and medicine. Chemistry may be a mere list of elements and compounds with their symbols and reactions, or it may be a glimpse into the constitution of the universe and a guide to industry and human progress. The vocational aim is not necessarily at war with the academic spirit. All our New England colleges were founded with vocational purpose, the direct training of young men for certain professions. Indeed the vocational aim rightly understood may save us from unreality and fog. Truth is not worth seeking unless it ministers to life, and all truth that does so minister is rich in material for culture. The greatest scientists are not mere marvels of erudition or generalization. They are intensely human. Pasteur's great discoveries were all the result of patriotic devotion to his country and sincere love for his suffering fellow men. Because the peasants of France were starving he studied the habits of the silkworm, because he saw children in convulsions he sought a cure for hydrophobia. The affectional side of his nature, his tenderness to his wife, his ambition, combativeness, power of anger—these things supported his scientific intuition and made it effective. One of his last utterances was "I am sorry to die; I wanted to do more for my country. The scientist's cup of joy is full when the result of his observation is put to immediate practical use." Out of such a full deep rich nature, "out of the burning core below," came the impulse to scientific research. Such a nature was Agassiz, whose monument is all around us in America. The finest scholarship of the world springs from a red-blooded humanity, and its methods in school and college should appeal to the entire nature of human beings.

Fourth, above all we must exalt personality above mechanism in school and college. As I visit the superb new high school buildings recently erected in various cities, I feel a strange mixture of pride and regret—pride in such lavish expenditure and mammoth apparatus; regret that hundreds or thousands of pupils must be thus herded under one roof, and that the vast expenditure is not for teachers but for marble vestibules and ventilating fans, and electric clocks and bells, and admirable ovens and lunch counters, and all the devices which are forever desirable but forever subordinate in true intellectual growth.

And the school principals may well make the retort courteous as regards our universities. We are profoundly grateful for the libra-

ries and laboratories, the halls of literature and science that have arisen in many places as if at a touch of a magic wand. But the question steadily presses whether we are still masters of our materials and able to keep the soul on top. The remedy is not to be found in less material, but in larger spiritual wealth. In Germany the leading university professors are far better known than the institutions they serve; in America we think first of the organization —of Princeton, Chicago, Wisconsin—and only secondarily of the men who make the institution what it is. But we shall in due time grow up to our equipment—and students will resort to Pennsylvania or Leland Stanford, not because of any gymnasiums, or pools, or memorial gates, but because they there come under the instruction of men who are guiding the national action and shaping the national ideal.

The university is a fellowship of scholars, and participation in the fellowship is higher education. The older Oxford ideals, replaced for the last thirty years by German ideas of vigor and rigor, are coming again to their own in America. The most interesting experiment in American colleges is that made in the last two years at Princeton, where 60 new preceptors were added to the faculty at a blow, these men being chosen primarily for their human quality and sympathy with young manhood. Whatever the defects of such a system, it certainly exalts personality in teaching, and allows time for the study of individual students. It makes students, and not departments or courses, the center of university attention. The old farm labor of a former generation in New England was labor in association with men who knew their calling and could teach it. The old apprentice system was toil in association with master workmen. The lawyer or doctor or minister then learned his calling by association with older and wiser men. There is no other way to learn anything. Back of all books and buildings and curricula and examinations and pageants lies the contagion of great minds as the sole quickening power, the one irresistible and undying force in education.

One of our colleges that has borne an honored name is now facing a certain aspect of this question. It has been offered from one to three million dollars on condition that it pledges itself never through all future centuries to allow intercollegiate sports. We at a distance know too little of the situation to utter any final judgment as to what were the reasons for such a unique bequest or what

would be the local effect of such stringent prohibition. The real question lies far deeper. It is this: Shall any American college for the sake of any gift whatever, part forever with the power to shape its own interior life? Shall it secure ample endowment by a sacrifice of autonomy? Shall it be compelled to say through all the centuries, "We are prohibiting what we believe to be desirable in the life of young men, we are enforcing rules that we inwardly repudiate, solely in order to keep the treasury full?" If such a bargain is struck, will we not soon have the announcement of other millions to other colleges on condition that free trade or the doctrine of evolution or the higher criticism shall never be taught within these walls? What a superb victory would it be for academic freedom, for the triumph of soul over materials in education, if just now it could be forever settled that no wealth, however great, can purchase power of control in our colleges! Those who give to an institution should trust it to unfold its own life. They should endow it, if at all, in the spirit of generous confidence, realizing that a living organism must develop from within, and must remain intellectually and socially human and free if it is to serve the republic.

Have we spoken critically this evening? Who have clearer right to point out weaknesses in education than those who are giving their lives to its service? Thousands of teachers fully realize the truth of much that I have said and are striving daily to put it in practice. Never before, I believe, was the training of youth so effective, all things considered, as it is today. Our system of education is worth attack. Steadily abuses are being corrected, the shadows are departing, and the sun rises.

> Not by eastern windows only,
> When daylight comes, comes in the light,
> In front the sun climbs slow—how slowly!
> But westward, look! the land is bright!

WHAT SHOULD BE EMPHASIZED AND WHAT OMITTED IN THE HIGH-SCHOOL COURSE IN ALGEBRA?[1]

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The wording of the topic implies that something is wrong at present in the high-school course in algebra. This assumption seems to find justification in the large number of papers on this subject which have been read in recent years before conferences and associations, in the reports which various committees have worked out and presented before representative bodies of teachers, and in the perennial agitation over the failure of the schools to make their pupils measure up to the college-entrance requirements. From the standpoint of the college and university the freshman far too frequently proves a disappointment and a sorrow in view of the time and pains which have been given him by the secondary teacher in his mathematical preparation; and from the standpoint of the usefulness and power which his knowledge of algebra should give the boy, whether he goes to college or not, there seems much to be desired. Opportunity to make any use of algebra within his environment is unknown and unlooked for by the pupil, and when, perchance, such an opportunity suddenly appears, say in the class in physics, he is taken completely by surprise and surrenders at once, especially if s and t are the unknowns instead of x and y.

Assuming then, that serious trouble exists and further, as implied in the wording of the topic, that this trouble is due, partly at least, to overcrowding of subject-matter into the course and to unpedagogical distribution of emphasis upon the various phases of the subject, the question before us is to determine the *proper basis* upon which the omission of topics and the redistri-

[1] Read before the annual High-School Conference at the University of Illinois, November 22, 1907.

bution of emphasis may best be effected. At the very outset we are confronted with a variety of criteria, every one of which has its strong and enthusiastic advocates. In fact it is precisely because of these many strong claims for consideration that the elementary algebra texts have become so overgrown both as to material and as to methods of presentation. It behooves us, therefore, to consider carefully these various claims, and to proceed cautiously in determining our controlling principle in proposing any radical changes.

In the first place, quite independent of what we might think is most desirable or profitable, there are the demands of various examining bodies. While the College-Entrance Examination Board has done much to unify requirements and to put reasonable limitations on the topics demanded, yet at least one important state university in a recent announcement for the algebra requirement in the *first year* of the high school includes the topics: quadratic equations, radicals, theory of exponents, inequalities, ratio, proportion, and progressions. It is implied in this announcement that a complete and rigorous treatment of these topics is not expected in the first year, but one may well question whether the attempt to force a class of fourteen-year-olds through such a *range* of topics in a single year can be justified on any grounds.

Another obstacle in the way of omitting topics thought to be of minor importance at a given stage of progress is the arbitrary local authority which the teacher often meets. Some superintendents and principals are open-minded and ready to try any manifest improvement, but others are quite the reverse. For instance, a teacher in a large school under public control in an important city testifies that no improvement along the line suggested by our topic is possible in that school, because all sections of the algebra class are periodically and arbitrarily examined by the officer in control, the teachers knowing nothing of the questions to be given, but having only a list of prescribed topics to be covered in each period of time between examinations. The difficulties of examination requirements were recently well summed up by a teacher in Chicago who said: I

must prepare my pupils for the normal examinations which emphasize mechanical processes; for examinations for teachers' certificates which emphasize intricate and demonstrational processes; and for the universities which emphasize graphic work and application to mechanics and physics. What shall I do? My desire is to teach my pupils the things which seem *best adapted to their environment* and development, to give them those phases of algebra which are at once practical, useful, and interesting, but my temptation is to secure sets of previous examination questions from these various sources and cram the pupils to pass examinations. My reputation as a teacher and the standing of our school depend upon having our pupils measure up to these tests.

But secondly, suppose the school authorities are enlightened, liberal-minded, and disposed to help on any movement toward real reform—and we are glad to believe that such is the case in a surely and rapidly widening circle—how shall we then secure any unanimity of action? Here is a body of teachers who believe that rapidity, facility, and accuracy in performing the mechanical manipulations of algebra are the most important things. In fact, if we may judge by the widely prevailing practice, is not this the belief of the vast army of teachers? And have they not some good grounds for this belief? Have not many of the textbooks fostered this belief by so arranging the topics that, with the exception of a few simple applications on the opening pages, nothing but *abstract manipulation* of symbols is provided for the pupil for a period of three or four months, during which time he is likely to receive his lasting impressions of the subject? These teachers say with some force: Is not this the phase of algebra which underlies successful work in other branches, both in high school and in college or engineering school, and is not this just what the university wants of our pupils? Do not the examiners praise the candidates of this type whom we send up for admission? And, after all, is not the training in skilful operation and good form the chief thing to be gotten from the study of algebra? Where will the pupils ever use it, especially if they do not go to college, as most of them do

not? Therefore should we not instil in them this mechanical expertness which will serve them well in the store, the shop, the trade, the office, or the profession? Moreover, they say, we find our pupils enjoy this kind of work. Anything that is in the nature of a puzzle appeals to the child and they actually get infatuated with long examples in highest common divisor or in the addition of long strings of literal fractions, especially if they are all fixed so that at the end everything drops to pieces and gives a simple expression as the answer.

We are not at this moment concerned with weighing these arguments. We simply note that they exist and that large numbers of teachers determine for themselves their attitude toward the proposition which is before us today on the basis of this point of view, and to this view they hold with tenacity.

In the third place, there is another large body of teachers who hold a different view. They say that adeptness in the demonstration of principles is the real thing in algebra, and that no clear and intelligent understanding of the subject can come in any other manner. They admit that accurate mechanical work is essential but say that it is entirely subordinate to clear thinking. These teachers would mark a paper very high if it showed sound reasoning, even though it contained mechanical errors, while those in the preceding class would cut it down mercilessly for every numerical mistake. These teachers would say further: Is not the true purpose in the study of mathematics to gain power in thinking, to develop mental muscle, to learn to know when a conclusion follows from a premise, and not to be deceived by fallacious argument? They maintain that these things should be insisted upon quite as much in algebra as in geometry, that otherwise geometry appeals to the student as that branch of mathematics in which we prove things, while algebra is nothing more than mere ciphering. They insist upon the study of the *foundations* of algebra in the first year, that is, they try to compel the student at the start to appreciate a *demonstration* of those things which he already knows more surely than he does after he has tried to prove them, such as, for instance, $a+b=b+a$, $ab=ba$, $a(bc)=(ab)c$, etc. In geometry

these same teachers start a class on the proof that all straight angles are equal and like theorems. In the words of one writer, these demonstrations are insisted upon not so much to give the student confidence in his intuition as to *justify* the confidence which he has. They maintain that since the only time to make foundations for a house is before you build the house, therefore the foundations of algebra and geometry must be studied at the beginning of these subjects. They claim, further, that herein lies the chief cultural value of the study of mathematics. This is the reason for keeping algebra in the curriculum. This is the bulwark which has enabled mathematics to hold its own alongside of the cultural studies. Did not Lincoln and Garfield by the study of mathematics as a demonstrative science charge their minds with power for the great forensic struggles, in which they engaged, and shall we do less for the youth of today? And, finally, they maintain that there is no true enjoyment in the study of mathematics except in discovering the reasons for things and that the pupils of the first year of the high school appreciate this as keenly as the graduate student in the university. They say it is no less than heartless simply to let them cipher and cipher and never taste the true pleasures of arguing from hypothesis to conclusion.

But still a fourth class of teachers will insist that the basis of modification in our present curriculum should be the development of skill in the statement and solution of problems. They say the real business of algebra is to help unravel the mysteries of our environment through the agency of the equation. To be sure, we must know how to manipulate this tool and should, within reasonable bounds, be acquainted with the logic upon which its use rests, but the great thing is to be able to bring things to pass and to find out results by means of it. They argue that it is this phase of algebra that should constitute the true correlation with geometry and with physics. Herein, they say, is the chief complaint against the algebra pupils when they enter these subjects, namely that they cannot use their algebra to solve problems, and the reason, it is affirmed, is that so much time has been spent in the algebra in mere abstract manipulation,

or in abstruse demonstration, that the pupils have received no adequate training in the statement and solutions of problems. These teachers say that real power lies in the ability to interpret phenomena and that this must begin in simple stages with little problems in algebra in which the given data are to be translated into algebraic symbols and the whole formulated as an equation. This power must be developed gradually and persistently throughout the whole algebra course, advancing step by step to the consideration of more involved data and taking up the study of numerous classes of phenomena, especially those having interest and value in themselves or for their practical applications. In this way only, they say, will the algebra pupil gain the power to use his algebra in the study and interpretation of the phenomena of life. And, moreover, they affirm, that in this way only is found true enjoyment in the study of algebra, namely, the joy derived from doing things which have a practical value, and whose bearing upon life and its intepretation can clearly be seen.

From all these varying points of view, for each of which the advocates are numerous and strenuous in their defense, how shall we decide what to eliminate and what to emphasize in the high-school course in algebra? The examination fiend would have us keep *everything* in and spend our restless days and feverish nights concocting new forms of puzzles to spring upon the boys and girls. The expert manipulator would have us gain time by omitting all demonstrations and most of the reading problems, in order that the highest skill in algebraic gymnastics may be obtained. The theorem demonstrator would have us devote our chief attention to the theory and logic of the subject and so would cut out a large amount of mere drill exercises. The problem solver would reduce our books to a mere collection of exercises and problems and upon these he would drill and drill and drill.

Is there any way to reconcile these elements in any one scheme of procedure? There is still one party to this discussion whose case has not yet been considered. The *boy* himself should have a hearing. We have been considering in detail the nature

of the ammunition and the weight of the charge, but what about the composition and caliber of the gun? How much can the average high-school boy hold and assimilate? What phases of algebra are best suited to him at different periods of his progress? What kind of work in algebra will best fit him for life? What ought to be his relation to college-entrance requirements? The consideration of these and similar questions may aid us in throwing light upon the problem before us. This, as I understand it, will be acting in the spirit of the new education, namely, to resolve the study of the curriculum into the study of the boy and girl of today.

From the standpoint of the *pupil* shall we not find all classes of teachers in substantial agreement on the following points:

1. There is a marked difference in the mental and physical development of the average pupil in the first year of the high school and the same pupil in the second year, and a still more marked difference in the third year. If this is so, then the kind and quantity of work in algebra which is appropriate for the first year should differ essentially from that which may properly be given in the second or third years. This principle is by no means always followed and teachers are often deceived by the fact that the first-year pupil will *memorize* demonstrations, rules, and formulae readily and even then fail to comprehend their real significance simply from lack of the necessary maturity of mind, as is plainly shown by the ease with which the comprehension comes a year or two later.

2. There is a marked difference among the topics of algebra with respect to their comprehension and mastery on the part of the average first-year high-school pupil. For example, consider, on the one hand, the operations of algebra as extensions of those of arithmetic and their applications to the solution of linear equations in one or more unknowns, the simpler processes of factoring and their applications to quadratic equations with *rational* roots, the process of square root and its application to the solution of quadratic equations with *real* roots, and to the handling of simple radicals such as computing the altitude of an equilateral triangle in terms of the sides; and, on the other hand,

the theoretical consideration of the commutative, associative, distributive laws, the demonstration of the Euclidean method of finding the highest common divisor, the theory of equivalent equations, the theoretical treatment of fractional and negative exponents, of radicals, of quadratic equations, etc. I doubt if anyone would claim that the topics in the second list and those in the first are in any manner within a like range of comprehension on the part of a first-year high-school pupil.

3. There is a marked difference between the topics of the second list given above and the subject of plane geometry. Those theoretical and complicated parts of the algebra are far more difficult of real comprehension than are the elements of plane geometry. The geometry is concerned with those things which have a tangible and visible existence, so that the demonstrations may be anchored to a concrete foundation; while the advanced portions of the algebra are at best represented in abstract symbolism whose essence is neither tangible nor visible, and which therefore demands a greater degree of maturity on the part of the pupil in order really to grasp it.

If the foregoing propositions relating to the maturity of the boy are accepted, and they seem almost self-evident, then we can readily reach the following corollaries:

a) Not *all the topics* of what is known as high-school algebra should be attempted in the first year—not even though some college or university specifies that they shall be. If only one year can be given to algebra as is the case in some small schools, or as is sometimes the total requirement for graduation from the high school, let that be devoted to those topics and that presentation of topics which are fitted to the pupil at that age, and which have some relation to his environment.

b) If, however, as is usually the case, at least another half-year is given to the subject, let that be, by all means, *after a year of plane geometry,* both for the reasons given above and because the richest applications of the advanced algebra are found in the geometry. In this way the concrete and mensurational geometry of the grades is used freely in the first-year algebra, the elementary algebra is used freely in the geometry and the

geometry is used freely in the advanced algebra; all of which is a long and commendable step toward breaking down the artificial partitions between these subjects. But wherever in the curriculum it occurs let it be understood that this additional half-year of algebra rests on the assumption that the pupil is now able to look at the subject from a different point of view, from that of the first year, with respect to his maturity and reasoning power.

If this contention be admitted then the first-year course cannot properly be planned by simply making a *vertical* cut at some convenient stopping point in the total body of matter known as high-school algebra. There must be a *horizontal* cut. Almost every topic has a portion properly belonging to the first year and another portion belonging with equal certainty to the advanced course. Let us therefore see if we can formulate a guiding principle upon which the choice of work appropriate for the first year can be made, and then by exclusion determine the portion to leave for the advanced course.

Still looking at the question from the standpoint of the pupil, shall we not agree that it is best to present the first-year algebra as far as possible from a concrete point of view and to develop the processes as directly as may be out of those already familiar in arithmetic? If, therefore, it is agreed that the highly complicated and abstract mechanical manipulations, as well as the purely theoretical and demonstrational portions, are to be postponed till the later course, then we have at once what may be used as the guiding principle in selecting topics for omission and emphasis in the first year; namely,

Let the handling of the equation be the central theme and the solution of problems the main business of the course, and around these let the theory and practice of algebra be built.

The application of this principle under proper restrictions will transform the first-year algebra course into a rational, practical, and pedagogical treatment of the subject, one which may be made to meet the essential demands of each of the four classes of advocates described above.

The points to be noted in applying the principle are:

1. The problems must not be merely a miscellaneous collection. They must be selected, grouped, and graded with far more care than is the case in any mere exercise book, for the plan is to build the algebra around the problem, by means of the equation as the instrument. The problems must be interesting, sensible, practical, in order to appeal to the pupils' best impulses. They must lead to answers worth knowing and working for, either in themselves or for application to other problems.

2. A collection of problems alone, however well graded and carefully grouped, is not of itself a sufficient text for the purpose. The principles of algebra are to be made to grow out of problem situation, not as a demonstrational process at this time, but as a practical extension and development of the principles of arithmetic already in hand. Each set of problems is to lead to the formulation of a definite principle, which in turn will underlie another principle to be drawn in like manner from a succeeding group of problems, and so on, until finally a coherent chain of principles binds the whole together. Failure on this point is the failure to strike when the iron is hot; it is to allow the whole process to degenerate into mere problem solving.

3. The problems themselves will not furnish sufficient practice in applying each new principle as it is brought out, but numerous drill exercises will naturally be associated with each group of problems and will have their point and purpose, therefore, self-evident in each case. With these safeguards provided, we shall now see that our guiding principle will lead to results which should satisfy all concerned:

On this plan, the boy learns to appreciate finding a reason for things because, first of all, he sees a *reason for algebra itself,* and in learning here how to use it both in discovering results and in building up a body of principles, he will be prepared in the later course to appreciate the logic and the reasoning *there* used in establishing theorems relating to the facts with which he already has a working acquaintance.

The boy thus learns to appreciate mechanical manipulation because he sees the *need* of accuracy and skill in using the tools of algebra, and when these drill exercises are given in connec-

tion with the problems to which they are applicable he works with zeal and intelligence because he recognizes the importance of the work. For this reason drill exercises become effective in accomplishing their purpose. The boy learns to solve problems in a way that will give him power and insight when he reaches physics, mechanics, engineering, etc. He has not come to the problem at the *end* of a long and artificially constructed chapter of theory, or after weeks or months of blind mechanical manipulation, but he has learned to recognize the problem as the *vital thing*, the only thing which puts life and blood into the whole subject, and he is therefore at home in the problem environment of later science subjects.

By this process the boy may even become an examination expert. At least he will have gone through a régime which gives him possession of his faculties and power to cope with a situation, which are essential in passing examinations. Moreover, in acquiring his drill work in connection with its *uses* he is more likely to be able to retain and to reproduce it on the spur of the moment than he would be if he had simply memorized it like a parrot.

The application of the principle that the equation in its relation to the problem should be the central theme around which the theory and practice of algebra are to be built will readily determine for us a natural order of topics and the proper distribution of emphasis, as well as those topics which should be omitted from a first course and taken in a later course.

1. If the formal material of algebra is to be introduced as needed in handling problems, then literal fractions, long division, and long multiplication of anything more than binomials, and a large part of factoring—topics which usually occupy most of the early months of the first year—will come in the latter part of the year, thus bringing linear equations in one and two unknowns, and fractional equations, with numerical denominators, early in the course, and introducing here a rich body of practical problems involving all sorts of interesting and useful topics, including the straight line graph as a handy tool both in representing data and in solving problems. To one who has not

given it thought, it is a surprise to find how little of the complicated forms of algebra we ever use in solving problems. Why, then, put the beginner through months of gymnastics in these before allowing him to find out what it is all good for? By reversing the process and allowing him to see some of the *interesting* and *useful* side of the subject *early* in the course, he then will be prepared to take up the formal side later in the year and to handle it with intelligence and zeal.

2. This plan of linking the formal work directly with its applications would bring equations solved by factoring immediately after factoring, long division of polynomials in connection with square root, followed by quadratic equations solved by extracting the root, and immediately applied to a body of rich problems in radicals of the second degree, such as arise in mensurational geometry; and it would postpone literal fractions well toward the end of the year.

3. In general, the principle would postpone to the second course all long and complicated work such as H.C.D. and L.C.M. by the division method, involved complex fractions, intricate factoring, the theoretical treatment of exponents, radicals, and quadratic equations. It would emphasize the useful and practical and postpone to the second course the theoretical and demonstrational side. It would carefully develop out of arithmetic, and formulate, the principles of algebra and make them familiar by means of constant application to useful and practical things.

4. In the second course, when the pupil is more mature, can be emphasized the demonstration of principles and the deeper consideration of the topics either not touched upon in the earlier course or only treated in an elementary manner. In the second course all the requisites of college entrance can be fully met.

If the question arises as to the status of the first year's work, as above outlined, with respect to college requirements, we may safely affirm that what is best for the boy in first-year algebra ought to be recognized as good enough for a unit of college admission, and what is best for college admission in the second course in algebra ought to be recognized as good for the boy

also, whether he goes to college or not, so that *all* high-school students should find in the whole year and a half of algebra that which is interesting, cultural, and practically useful.

The principle here advocated is by no means new but it has undergone a long period of disuse in this country. The signs are now hopeful, however, of a speedy and effective revival. In fact, scores and even hundreds of schools throughout the country are awakening to the realization that the algebra course has been abstract, barren, and unrelated to the experiences of life, and are making heroic efforts to infuse life-blood into it. But they find themselves limited by the rigidity of existing curricula and especially by the fact that the prevailing textbooks have emphasized the abstract, mechanical, and formal side of the subject. Not a few schools, both large and small, have, however, broken entirely with the traditions, and numerous important steps are in progress looking toward further developments.

For instance, an important report of the State Teachers' Association of Wisconsin which was published this year, is directly in line with the spirit of the suggestions here made. A committee report of the high-school teachers of mathematics in the city of Chicago recommends a reorganization of the algebra work on this basis.

A representative committee of the Central Association of Mathematics Teachers has been working during the past year on a report of far-reaching importance which was presented at the meeting last Autumn in St. Louis, and which has recently been published in *School Science and Mathematics.*

It is no mere coincidence that these and other representative bodies are so strongly advocating these points of view. They are simply evidences of the present trend, and expressions of deepest thought in the concerted and widespread effort to improve the teaching of mathematics. It starts high up and reaches down deep. It is affecting colleges, universities, and technical schools, on the one hand, and the grammar grades on the other hand. The teaching of college algebra, analytics, and calculus is undergoing the same careful scrutiny and reorganization. No more significant fact has appeared on the horizon

than the publication this year of a book called *A Course in Mathematics,* by Professors Woods and Baily of the Massachusetts Institute of Technology, which, if I understand it, is intended to revitalize the first two years of college mathematics in a manner comparable to that which has been set forth in this paper for the preparatory algebra, and which the writer has it in mind to advocate for geometry. In fact, it should be said that these present proposals which naturally involve the infusion of geometry into algebra and in turn the infusion of algebra into geometry, will logically lead in the not distant future to *A Course in Mathematics* for the secondary school which shall be as coherent and concrete as the one now prepared for the Institute of Technology.

A ROMAN DINNER

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Early in the fall of 1905–6, the Executive Committee of the Classical Club at Lewis Institute began to plan for a Roman dinner to be given in November in a celebration of the *Ludi Plebei*. The unique character of the event as well as the air of mystery veiling all our preparations—for all details were kept entirely secret—aroused the greatest interest not only throughout the school but in the community at large.

At a quarter of seven on the appointed evening, the door connecting the reception room with the mysterious dining-room swung open, and the tricliniarch announced impressively to the one hundred and twenty-five waiting guests, "Cena 'st parata." The procession formed and, as the harp began a stately march, passed into the dining-room, warned by a slave at the door to enter, "Dextro pede."

The scene that met the eye was one not soon to be forgotten. The yellow lights of dozens of Roman lamps and candelabra flickered softly along the polished surface of the tables and over the groups of slaves in their simple Greek kitons, standing as passively in their places as the statues half concealed among the palms. The tables were arranged as three large triclinia with a serving-table in the center of each, the guests sitting around the outside only. Among the ferns and red roses strewn over the tables stood papier maché donkeys bearing panniers of olives and radishes, which recalled the bronze ass at Trimalchio's feast. At each cover, beside the menu card, done by hand in the capitals of the early empire, there was a place card in the form of either a goose or the Capitoline wolf, inscribed with a Latin quotation.

When all were seated, slaves with silver pitchers, basins, and towels poured water over the hands of the guests in due form, after which the two small pages filled the drinking glasses. The

dinner itself was served with a deliberation and dignity which surprised even those who had planned it all.

The menu had been arranged after weeks of study in all the available literary sources, and was an effort to present within the limitations of our means a typical Roman dinner, "ab ovo ad mala." It consisted of a *gustatio* or appetizer, *fercula* or series of courses, and *mensae secundae,* dessert, the *mulsum* being introduced between the *gustatio* and the *fercula,* while the *Caecubum* and *commisatio* followed the *mensae secundae.*

The *gustatio* consisted, first, of a head lettuce, *lactuca capitata* and eggs, *ova,* arranged to represent a bird's nest salad, dressed with oil and served with radishes, *radices* and bread sticks, *pastilli*; second, hot tomales, which we have reason to believe are the lineal descendants of the Roman *tomacula,* endives, *intuba,* olives, and small rolls; third, oysters, *ostriae Lucrinae* with pilot biscuit, *panis durus.* After each course the slaves removed all the dishes and rubbed the tables with the purple *gausauppes* which they wore in their girdles.

Then again the harp sounded and bowls of *mulsum* were brought in and served, made, except for fermentation, as the Romans made it, of grape juice and honey.

At the conclusion of this course, the slaves retired with the *structores* and tricliniarch, and all awaited with great curiosity the Umbrian boar, which was the *pièce de résistance* of the dinner. At last two pages entered blowing trumpets, and behind them, each bearing on his head a roasted pig, came the *structores* followed by all the retinue, two by two. The procession passed with the utmost dignity around the entire room and then deposited their platters upon the serving-tables where the carving was done with an attempt to imitate the fantastic pantomime recorded of ancient *structores.* With the pork were served beets, turnips, and bread, but, of course, no potatoes.

After the tables had been cleared and rubbed as before, the *mensae secundae* were brought in, consisting of little cakes, *bellaria,* and apples hollowed out and filled, in concession to American taste, with ice cream.

The pages, with chaplets of vine leaves strung the length of

their arms, now entered and the *structor* at each table, removing the needed number, proceeded, with his subordinates, to crown the guests under his charge. Then great bowls of *Caecubum* were brought in and the *magister bibendi* at each table crowned the crater with smilax and poured a libation from the *patera*.

While the guests sipped their wine, a quartette of girls in Greek gowns sang two settings of the "First Pythian Ode" of Pindar and the "Hymn to Calliope," and Horace's "Vides ut alta stet nive candidum Soracte," was given in Latin. Four brief addresses by representative men regarding the value of the classics to the professional man brought the evening to a happy conclusion.

THE REFORM OF COLLEGE ENTRANCE EXAMINATIONS IN LATIN.

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The purpose of this paper is, first, to consider certain criticisms of the requirements in Latin for admission to our various colleges, secondly, to examine the remedy proposed in certain quarters as a means of curing the alleged defects in those requirements, and, lastly, to urge a revision of the mode of administering entrance examinations in Latin which, it is believed, will fully meet all criticisms of the prevailing requirements and at the same time make for far better progress in Latin, in school and college alike, than is achieved under existing conditions.

American colleges differ widely in the amount of reading in Latin which they demand of candidates for admission, but in their modes of administering the examinations for entrance and in their ways of seeking to measure the fitness of candidates they are essentially at one. The candidates are examined mainly on prepared work, that is, on portions of Latin literature which they are expected to have read and studied with care, with any assistance they may be able to obtain from their teachers or from editions of the prescribed works. They are required to translate into English passages from these parts of Latin literature and to show some knowledge of the mechanics of the passages, that is, of Latin syntax. There is a tendency to expect the students to display some conception of the contents of the works in question, and of their literary divisions, and of the varied literary questions which they suggest. There is commonly also an examination in the translation into English of Latin prose or verse, or both, at sight, and in the translation of English, whether in the form of detached sentences or connected narrative, into Latin.

With the situation as here outlined dissatisfaction is vigorously expressed in divers quarters. The complainants fall into

two groups, the representatives of the schools and the teaching staff of the colleges. The schoolmen complain that too much is required, that in the time at their disposal and in the crowded state of the school curriculum they cannot get their students satisfactorily over the ground prescribed. Coupled with these complaints is a claim that if the *quantity* required for admission were to be reduced, the *quality* of the work done would be greatly improved. From the point of view of the college instructor the average freshman is grotesquely deficient in his Latin; his knowledge of inflectional forms is uncertain, his conceptions of syntax are futile, his vocabulary is a negligible quantity, he has no particular power to read Latin, with or without dictionary and grammar. Both sets of complainants unite in deploring the use of translations ("ponies") by students, male and female both.

The view that the present requirements for admission to college are in general excessive is presented most earnestly, perhaps, by Mr. Wilson Farrand, of the Newark Academy; see the *School Review* for January last (Vol. XVI, pp. 12-41). I shall quote only what he has to say of Latin (p. 20):

> My fourth recommendation is that Latin and Greek composition shall be either eliminated or decidedly reduced. Composition is of unquestioned value in the mastery of a language, and I do not see how anyone can teach elementary Latin or Greek without its constant use, but when it comes to training, or trying to train, our pupils to write Latin like Cicero, or Greek in the style of Xenophon, my observation is that the results do not pay for the labor. I am aware that to many of you this view will appear heretical, and I do not propose at this time to argue it. I merely assert, as a thesis for discussion, that Latin and Greek composition in college-entrance requirements, should be limited to exercises designed to illustrate commonly used grammatical principles.

In this brief paragraph, Mr. Farrand seems to speak of composition as a highly valuable thing and yet to oppose it entirely or largely. I suspect that the confusion is a matter of definition of terms and that, consciously or unconsciously, he is taking advantage of the time-honored blunder of the colleges in using the word "composition" at all in connection either with entrance examinations or their undergraduate courses in the writing of

Latin. No college of which I have knowledge has required candidates really to *compose* in Latin. Mr. Farrand admits that no one can teach elementary Latin without the constant use of composition, by which I take him to mean constant practice in turning into Latin English sentences written by someone else and printed for him in a composition book. This is manifestly a far different and less difficult process than the one involved in true composition. If, as Mr. Farrand admits, this sort of work is essential to the teaching of elementary Latin, why take exception to the conduct of the colleges when they seek to discover, by entrance-examination tests, whether a given candidate has done this indispensable work?

In another respect Mr. Farrand himself destroys the edifice he has so laboriously constructed. In the third paragraph of his address, before he had really entered upon the statement of his position, he said (p. 12):

> I am not just now concerned with the physical strain upon our students. It exists, more strongly with our girls than with our boys, and it is a factor not to be ignored in the problem, but personally I believe that the physical strain is due more to improper social life and home conditions, and to school organizations and athletics, than to over-study. My contention is that the amount of work we can secure from our boys and girls is spread over too large an area to secure the best results. We need less diffusion and more concentration.

It is surely extraordinary that one should argue seriously that colleges should adapt their entrance requirements, that is, their standards, to the amount of work the schools can secure from their pupils, from pupils engaged in purely extraneous non-scholastic matters. We do indeed need less diffusion and more concentration, but the concentration needed is concentration upon study!

Of our two sets of complainants one, surely, is on a priori grounds entitled to far less consideration than the other. The schoolman by his very position is virtually incapacitated to see the problem aright. By that I mean that it is impossible for him to take a detached and impersonal view. His task is to prepare boys and girls for college; there is nothing final about his work, it is to be tested by a different tribunal. The schoolmaster fears

that his school will be judged by the mental performances of the pupils he sends up to college; he sees a close financial relation between those performances and himself. Naturally, therefore, he casts about at all times for some explanation of the failure or seeming failure of his pupils, some explanation, that is, that shall leave his own position impregnable. He not unnaturally wants less to do, he not unnaturally desires absolute uniformity of entrance requirements the country over; these things will enable him to conduct his school on the most economical basis possible, with the smallest number of teachers. He shuts his eyes therefore and asks the world to shut its eyes to the ceaseless distractions of school life, with the diminishing total of hours devoted by pupils to serious study, and throws all the blame on the standards set up by the college; in a word, asks the colleges to lower their standards because he cannot discipline his pupils.

I confess to the heartiest approval of the trenchant words of Mrs. George Haven Putnam (formerly well known, as Miss Emily James Smith, as the dean of Barnard College), as published in *Putnam's Magazine* for January last, in an article entitled "A Classical Education":

> The universities and colleges exist for the purpose of determining, on scientific and not on commercial grounds, the best way to train our youth, and then to impose their views on the community. The very reason they are endowed by the public is to enable them to act disinterestedly. Upborne by the consciousness of the great interests of which they are trustees, of the tremendous part they are doomed to play in democracy, they might without arrogance use toward a young man at least as dictatorial a tone as he expects to hear from his tailor.

I come now to the plea already mentioned that if the quantity of the entrance requirements is reduced, the quality of the work done in the schools will be improved. So far as the classics are concerned the experiment has already been tried, and with results wholly disastrous. As a matter of fact, taking the country as a whole, the quantity of Latin required for admission to college is less today than it was twenty years ago. Thirty years ago candidates in Latin were required to present Greek as well; they were required to know something of ancient history and ancient geography and to pass a respectable examination in scansion.

Ancient history and geography were presently divorced from the classics (where they properly belong), and less and less stress was laid on scansion. Ancient history does, indeed, figure today in the subjects for admission to college, but as a thing divorced from the classics, as an optional subject. The instant result of this diminution of the requirement in classics was the disregard of Greek; it was no longer compulsory, it was no longer artificially stimulated, and so it was no longer taken save by the few. The Latin work itself has not profited in the meantime, though if there were any value to the plea made, for example, by Mr. Farrand, we ought to have witnessed a marked improvement in the quality of the work done on what remained of the Latin requirements. The only result has been that classical students do not get ancient history or ancient geography as part of their classical work at all, and that the student in the freshman class who has any adequate drill in scansion, that is to say, who has been made to feel that the form of immortal poetry is a vital part of that poetry, and is a thing worth serious study, is a *rara avis*. The schools know that the candidates will not be examined in such matters, or that, if the examination paper does contain these matters, the college instructor, realizing how weak the schools are in this regard, will attach virtually no importance to these questions. Unless all experience counts for naught, the reduction of the entrance requirements in Latin, the elimination of any subjects from the present list, will result merely in the failure on the part of the schools to regard those subjects at all, without corresponding increase in the effectiveness of instruction in what remains. A reduced curriculum in Latin will offer tempting opportunities for a reduction of expenses by a reduction of the teaching staff; history will repeat itself, in that the subjects lopped off will not be considered at all, and the rest will be no more effectively handled, so long at least as schoolmasters continue to talk of what they can do "with the amount of work we can secure from our students."

Having expressed myself on the futility of the proposed panacea for the weaknesses which confessedly exist at present, I pass to consider another, and, as it seems to me, a far more

promising way of remedying those defects. This way lies along the line of improving the instruction in Latin in the schools, and of changing the mode of administering entrance requirements and of conducting entrance examinations.

There is one curious incongruity in the present entrance examinations. As everyone knows, the student is tested partly on translation from Latin into English, partly on translation from English into Latin. There is, I take it, no question which is the more difficult of these two tasks. When the candidate essays to translate from Latin into English, he has a definite text before him, created not by himself but by a master of Latin; he is invited merely to analyze what is set before him. In a word his work is wholly or mainly of the nature of science or scientific analysis. In writing English into Latin he is attempting synthesis; his work partakes at once of the nature of science and of the nature of art. To write into Latin, at demand, any set of ideas the examiner may set before him—ideas often remote from the pupil's daily experience, limited in scope as that range of ideas is as actually set in examinations to the thoughts with which the pupil has had some chance to become acquainted in his Latin reading—is a far harder task than that of learning to express in daily conversation, in a foreign language in constant use, the limited range of ideas of one's own ordinary experience.

Yet, though the task of writing English into Latin is so much more difficult than that of translating Caesar or Cicero or Vergil into English, strange to say the colleges require candidates for admission to perform the harder task absolutely at sight; on the other hand the translation from Latin to English is almost wholly in prepared work.

The colleges play against their own best interests by thus confining so largely their translation of Latin to the passages previously studied; it is this that has given to the "pony" its vogue. In the young student the memory is stronger than any other faculty; the task of memorizing the "pony," at least in the harder passages, is not too great for many students. That demand on the mind can be met far more readily than the call

for powers of reflection, of logical analysis, of solid grasp of forms and syntax, of apprehension of word-order.

It may be said that practically all colleges require translation of Latin at sight. True, but in such fashion that the requirement is of little value. The sight paper at present plays but a small rôle in the total of the examinations. Again, the instructor is at great disadvantage in selecting a passage to be set at sight and in estimating the merit of the student's work thereon. I mean this: the college instructor has not had, until recently, any definite, objective standard by which he can measure precisely the vocabulary a candidate ought to have at the time he presents himself for admission to college. Unless he knows that, he cannot set an absolutely fair paper in sight translation nor can he accurately and fairly value the papers afterward. Since he has not known exactly what to demand of a student in such an examination, he has made allowances in his marking of the paper which have in large measure robbed the examination of severity or value.

Further, the present examinations and the methods of instruction in the schools which they encourage or impose do not yield the results desired. Students as a rule display no power to read Latin. It will be agreed that a highly desirable result of the teaching of Latin would be the development in the student of the ability to read Latin of reasonable difficulty at sight, or with little need of appeal to dictionary and grammar. Whether all would agree that from the beginning this should be the end of the teaching of Latin, all will agree that any method which will produce this result, which will develop the power to read Latin, will solve forthwith the problem of the school and the college.

Such a method is, I think, at hand.

What does a pupil need to enable him to read Latin with ease? Everyone will reply, knowledge of inflections, mastery of syntax, control of vocabulary, apprehension of word-order (I am supposing that the pupil has at least a modicum of linguistic sense, or, if you will, of common sense). Substantial progress has been made in the task of helping the pupil to a

mastery of forms and syntax. Any method which will increase the amount of Latin read by the pupil will add to his understanding of syntax and to his apprehension of word-order. Until recently, however, no adequate study in the vocabulary of the preparatory or high-school Latin (as it may be conveniently, though somewhat oddly called) has been made. Caesar's vocabulary had, indeed, to some extent been studied; it has long been known which words were of commonest occurrence in Caesar's *De Bello Gallico,* and due account of those words has been taken in various Beginners' Latin Books which proudly advertise that all or nearly all the words used in them are words of common occurrence in Caesar. Thus the intelligent and diligent student was fairly well furnished with vocabulary at the time he essayed connected reading in Caesar. But the effort to give systematic aid to the student in his attempts to acquire a vocabulary stopped with Caesar until Professor Lodge, of Teachers College, set himself to the task some four years ago. The solution has recently appeared in the form of a *Vocabulary of High School Latin,* prepared by Professor Lodge, and published by Teachers College as No. 9 in its "Series of Contributions to Education." In this book Professor Lodge sets forth the complete vocabulary of Caesar's *Gallic War,* I–V, the Catilinarian Orations, the oration on the Manilian Law, and that for Archias, and of the *Aeneid,* I–VI. The words are arranged, of course, in alphabetical order. By differentiation of types 2,000 words are picked out of the total vocabulary as words of such value to the student, not only in his school work but in all Latin reading in college or in later life, that they ought to be the student's permanent possession by the time of his application for admission to college. By typographical devices, again, these 2,000 words are divided into three classes, so that 1,000 words are marked out to be learned by the end of the Caesar year (the second year of the high-school course), and 500 more in each of the last two years. Now for the first time it is possible for everyone to know exactly the relation of the vocabulary of the *De Bello Gallico* to that of the orations commonly read in schools and to that of the *Aeneid,* I–VI. Nay, more, it is easy to demonstrate by what one may, if

he will, call laboratory experiments the relation of the preparatory school vocabulary to the vocabulary of the authors to be read later. Such experimentation Professor Lodge has already made, as part of his singularly exhaustive study of the problem to which he set himself. In his preface he writes:

> The number of words occurring five times or more (in preparatory Latin) is surprisingly small. Furthermore, these words are the essential words of the Latin language; for examination of a relatively equal amount of material selected from Caesar's *Civil War,* Cicero's *Orations,* other than those read in schools, and Ovid, showed occurrences of more than nine-tenths of these words. . . . . A student who has at his command these 2,000 words will have the vocabulary of fully nine-tenths of all the ordinary Latin that he is likely to come in contact with. He will really have much more because the remaining tenth contains a large proportion of compounds of words already known.

The first part, then, of the proposed remedy for all the complaints made against the existing conditions in Latin study is the mastery of this special vocabulary of 2,000 words, not merely for purposes of translation from Latin into English, but for purposes of rendering English into Latin.

The second part of the remedy is a reformulation of the requirements for admission and a reform of the mode of conducting examinations. The requirements may be set forth as follows: a thorough and accurate knowledge of inflections and of the chief principles of syntax, a vocabulary of 2,000 Latin words and their English equivalents, the ability to scan the hexameter meter, and a careful study of some prescribed portion of Latin literature of not more than 1,500 lines in length. The intent of the examinations on these requirements might well be defined as the testing of the candidate's knowledge of Latin and his ability to use his knowledge. To that end the examinations should be made almost wholly sight examinations. Since the meanings of all words not included within the 2,000 can be given on the examination paper, the candidate may be expected to translate with substantial accuracy and into good English. No allowance whatever need be made for ignorance of word-meanings or for slovenly English.

The examination might well be divided as follows:

A. Prose Composition.

1. Detached sentences, designed to test knowledge of forms and of the chief principles of syntax.
2. A short passage of easy narrative designed to test the candidate's ability to write Latin consecutively.

B. A passage of moderate difficulty from some Latin prose author to be translated at sight.

C. A passage of moderate difficulty from some Latin poet to be translated at sight.

D. A special examination upon some particular portion of Latin literature, previously studied, with reference to literary force and value; for example: Caesar, *De Bello Gallico,* VII, or Cicero, *De Lege Manilia,* or Vergil, *Aeneid,* VI.

In the examinations under A, B, and C, the Latin equivalents for all English words not readily translatable by the aid of the selected vocabulary, and the English equivalents of all Latin words not in that list should be given. The advantages of this plan are readily apparent. They may be grouped under two heads, according as they concern the work of the schools, and the entrance examinations, and as they concern the work of the colleges, I take them in order, grouped on this principle.

1. It gives objectivity and definiteness everywhere to the work of the schools. The essential forms of inflections are self-evident; there is agreement about the main principles of syntax; now at last the mastery of vocabulary has been made entirely possible. The schoolmaster now knows exactly what words will be of most service to himself and to his pupils; he knows also in what order those most useful words should be taught. The work can be made at every point definite; the pupil's progress in the mastery of the select vocabulary can be tested with mathematical accuracy. It will also be possible, as never before, to test the student's capacity to use knowledge in Latin.

2. It will give elasticity to the work of the schools. It will no longer be necessary to read prescribed works in Latin; the teacher may read with his classes what he will. Complaints are made at present by teachers that they are compelled constantly to read the same books and that, in the case of such authors as

Caesar, they dare not go outside the prescribed first four or five books, though the work in Caesar might be made far more interesting if they were at liberty to make a selection from all seven books. If the proposed reform is adopted, this difficulty is banished at once. The problem of the schools will assume a correct form; they will seek to teach their pupils how to read Latin; they will no longer seek merely to carry them over a prescribed list of works and to cram them for examination on those works alone.

3. It meets the cry of the schools that the amount of reading prescribed in Latin as the condition precedent to admission in Latin is too great. What will be exacted henceforth—should this plan be adopted—will be capacity to read Latin. It will be left to each teacher to develop this capacity in his own way; if he can develop it without reading the traditional amount of Latin he will be at liberty to do so. It is probable, however, that under the proposed plan the amount of Latin read by students before they apply for admission will exceed that read now, for, since the work will be from the start definite, with a definite goal and a definite path marked out from the very beginning for the reaching of that goal, the student's work will move more rapidly and satisfactorily than at present, and pupil and teacher alike will be more interested in seeing how much they can read with pleasure and profit than in seeing how much they can do without.

4. The adoption of the plan by the College Entrance Examination Board or by a number of colleges will go far toward solving another problem that confronts the schools, referred to at the beginning of this paper. If all colleges made their Latin entrance examinations mainly examinations at sight, without prescription of particular works, the training for all students in the school would be exactly alike, regardless of the particular college at which the pupil was to enter. The identity of the books to be read in the school, and the amount to be read in them, would rest wholly with the school; the school's one problem would be to develop in all its Latin pupils the ability to read Latin.

5. It will give to the college examiner a sure test to apply to candidates for admission. When he selects his passage for translation from Latin into English at sight, he will be guided by the Select Vocabulary; he will set no passage whose vocabulary falls in large part outside the list of 2,000 words. He will understand clearly what the candidate ought to know. When he reads the paper he can determine its value with mathematical accuracy. He will be able to test capacity, power to read the language, ability to undertake with profit the work of the college.

6. The use of "ponies" will be discouraged. How serious this evil is at present everyone knows. If the proposed reform is adopted, it will do the student no good to get his daily work by the aid of a translation; it will be a foolish waste of time to commit to memory a translation of work on which he will not be examined. Indeed, the use of a translation will be the most serious handicap conceivable to his acquisition of the powers which the examination will be designed to test.

7. Everywhere the teaching of Latin will be uplifted, by the substitution of an aim eminently practical and sane, wholly definite, and entirely possible of achievement (unless the student lacks that linguistic sense which no method can supply) for the existing chaos. The plan, then, means much to the schools; it will mean much to the colleges. They will admit in Latin only those who have by a reasonable test displayed their capacity to handle the language; the progress of Latin classes within the college will be far more rapid than it is at present, and the higher rate of progress will be attended by far less friction than attends the snail-like progress of today. I need not point out the advantages that will come from the possibility of taking one's classes comfortably and surely over a larger body of Latin writings; our students will then be able in the course of a couple of years' study within the college, added to the work of the schools, really to get a conspectus of the major works of Latin, to furnish their minds with a store of things which the man of culture should possess.

This remedy, then, is offered for the candid and careful

consideration of all teachers of Latin throughout the country, in school and college alike. I shall say here that the plan outlined is not original with myself. It is a plan of my esteemed colleague and friend, Professor Lodge. I have talked the matter over with him many times in the last four years, and the present statement has his approval.

THE VALUE OF HUMANISTIC, PARTICULARLY CLASSICAL, STUDIES AS A PREPARATION FOR THE STUDY OF THEOLOGY, FROM THE POINT OF VIEW OF THE PROFESSION

SHORT CUTS TO THE MINISTRY, WITH ESPECIAL REFERENCE TO THE ELIMINATION OF LATIN AND GREEK FROM THEOLOGICAL EDUCATION

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I am not responsible for the title given me, and I suppose we are all agreed that there is no royal road to learning, no short cuts to anything worth having. I imagine that the title was chosen in condemnation of any attempts to lower the standard for entrance into any profession. All responsible for education have at least ideals which would impose an irreducible minimum and would seek to stiffen requirements as soon as it became practicable. The denial of short cuts is perhaps not a very palatable doctrine to a generation that wants quick results, and, in any case, it is natural to assume that something less than the long and stately preparation once demanded for the old-time ministry could be made to do for the practical needs of our day. In some quarters, also, the shortage in the candidates is met by cutting down the ancient scholastic standards and by shortening the time required for study. It is the object of this convention to protest against this and to show cause why such a policy must fail of its purpose.

It ought to be said that it is not by the will of the churches that short cuts should have become necessary or possible. A completely educated ministry has always been the ideal of the churches of Protestantism. One only needs to know something of the history of education in America to know that this is so. All the older schools of learning had their origin in this ideal. Every college was started for the express purpose of supplying

educated men for the ministry. So when we make a definite pronouncement against the short cuts which would eliminate subjects we think indispensable, we ought in justice to remember that often the church is compelled to do what it can and not what it would. Circumstances are often too strong for us, and sometimes a situation arises in the church when it must use what material it has. In a country like this, where a great tract gets filled up in a few years, the church seeks to follow the movement of population and must do the best it can under the circumstances. It has to cover the ground, and, if need be, do without some of its own scholastic requirements. Then, there are different kinds of work needed in different situations, and it is fair to keep in mind the distinction between the qualities needed for a regular and long pastorate of the usual type and the qualities needed for what may be called the work of an evangelist. Indiscriminate condemnation of churches and seminaries that have to some extent departed from the old rigid standard is foolish. From what I know of some seminaries in America I am convinced that nowhere, certainly not in Great Britain, is there such a thorough and scientific training insisted on. In no seminary in the English-speaking world is there such equipment and such high class of scholarly and practical work done as in Union Theological Seminary—to mention the one I naturally know most about. But again, I say, we must consider the facts which make this standard impossible throughout the whole country. For instance, I have now in mind a seminary, which takes men otherwise qualified who have had no college training. Personally I am at one with you in thinking it a matter of regret that this should be necessary, but it *is* necessary, and in that seminary they are doing according to their opportunities magnificent work for the outlying parts of a great state which otherwise would not be supplied with men at all. They take the best men they can get, and give the best training they can provide, a training, I may mention, which includes Greek.

But the subject given me suggests a different and more difficult question than this one of practical means. It is the heresy that the old subjects thought at one time necessary for

the best education have no longer their place of pre-eminence. It is frankly held by some that the time could be better spent than on the old classical subjects. It is held that even for the training of divinity students Greek is no longer needed, that modern views of the Bible have altered the relative value of subjects, and that the New Testament has been well enough translated to give all that a minister needs even for preaching about it. Scientific subjects, political economy, sociology, are of more practical use for the up-to-date minister than the old discipline. It was to be expected that this view should be taken, since it is in line with a change in the whole world of learning generally. Professor Kelsey said that in this matter of the value of Greek we must educate the people. That would perhaps not be so hard as the other task in which we must educate the educators. We must fight out this question and settle it among ourselves as to the contents of a scheme of education designed for certain classes. We give up the old claim which called nothing education which was not built on the classics, but we are in danger of being swamped and denied even a place for the older discipline.

We suffer from a false democracy in learning which seems to hold that one subject is as good as another, and so we find an elective system run riot. I believe in an elective system and I believe that the general American ideal of a university is a great and magnificent one, but I do think that this ideal ought to be separated from an Academic course where the authorities settle, out of their wisdom and the wisdom of the ages, what is the best general training along certain lines. A university ought to be hospitable and should, if it have the means, be willing to teach any subject; and from this wide point of view it is true that one subject is as good as another. What is wrong is that this theory, which has its right place in a university with its varied professional schools, has been brought down to the ordinary college course, and even to some extent down to the high school. There is a sense in which it is unspeakably false to say that one subject is as good as another, if by that we mean that for the purposes of education and general culture of the mind any sort of instrument will do as well as another. A

university, for example, puts Spanish on the same level as Greek for entrance and for graduation; but anybody who knows anything knows that for discipline of mind alone, to say nothing of the literatures, the two languages are not on the same level. We ought to decide on relative values in education. Human nature being what it is, we cannot expect the ordinary student to choose Greek when Spanish would be so much easier to him, and when the whole current is against him.

The same thing is true about other things of equal importance in the ministerial education. The colleges send graduates to the seminaries who have never studied philosophy in the old sense of the word and who have never had Greek. They are supposed to have had their equivalents. In the philosophical department they have had psychology and sociology, and other courses to make up the required amount: and all this is of course on the principle that one subject is as good as another. It is perfect nonsense to say that these subjects, again for purposes of education, are of equal value with philosophy, which is the history of thought itself. It is to miss the strategic points; for just as a man trained in Latin and Greek will learn French and Spanish in half the time, so the student of philosophy is already half way to know all about the newer "ologies" sometimes substituted in its place. The colleges should look toward the professional needs of students, and the authorities should have their minds made up as to what in the general experience of the world is the accredited discipline, say, for a student who means to go on to the study of theology. I do not see why a boy who goes to a university with the intention of being a minister should not be taken in hand by advisory authorities who would wisely counsel him as to the things he ought to study; and even the boy who has not his mind made up as to his future course should have his course so far prescribed that the recognized subjects for the finest culture cannot be omitted. I do not want the colleges and universities to do seminary work, but it ought not to be left to the seminaries afterward to do what is really college work.

Complaint has often been made about the short pastorates that are so common today in the ministry. There are many reasons, but one is that the intellectual demands are greater than

ever before, and men find it difficult to last out. We are perhaps justified in assuming that a profounder training in these foundation subjects would enable a man to wear longer. An early training which included Latin and Greek would give some mastery not to be attained by the varied browsing of more modern methods. We would not have so many fads in religion if men knew more of the history of thought. I do not need to go back over the argument covered by President Mackenzie to prove that a minister cannot know his own subject if he is ignorant of the classical languages. Apart from the absurdity of a man dealing in any profound way with a book whose language he is ignorant of, it ought to be remembered that practically all learned commentaries are unreadable to the man who does not know Hebrew and Greek. It does not mean that we want to make men all specialists in these languages, but it is not so hard to get a working knowledge which enables one to get the good out of the work of other scholars.

I find great discouragement among teachers of the classical languages in the universities, and some of them have given as their judgment that in twenty or thirty years there will be little Latin and hardly any Greek at all taught in our universities. They say that the utilitarian subjects so called are sweeping these out ruthlessly. I might believe this if I did not believe that in the long run it can be demonstrated that for the highest education the languages and literature and history of Greece and Rome are supremely utilitarian, and that nothing can take their place. In any case there will always be many to whom utilitarianism of the gross type is not the final test of anything, and these are the men who sooner or later become the leaders of men. I am optimistic about this as about many other things. It is a great matter that a symposium like this should be held of men who are convinced because they know. We discover in education as in other things the swing of the pendulum, and it is even now swinging back to a more reasonable position. Certainly in the question of the value of Latin and Greek for the ministry that is acknowledged, and whatever place is given to other methods of training for special work, Latin and Greek will remain as a necessary part of the equipment of the theological scholar.

SPANISH IN THE SECONDARY SCHOOLS

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Whatever may be said in favor of the teaching of other modern foreign languages in general will apply with equal force to the teaching of this language, so there is nothing strictly new or original to be said upon the present tendency from the standpoints of pedagogy and practice. Spanish has found its way into a number of schools in the large cities and towns and the interest in the subject is rapidly growing. It is taught in the Central High School and in the Manual Training School in St. Louis; in the Dupont Manual Training School in Louisville, and, I am told, that in the Kansas City high schools courses are offered. This is also true of the colleges and many of the private schools in southern California, New Mexico, and Arizona. Professor E. C. Hills, Colorado Springs, is authority for the statement that in New Mexico it is taught in several important private schools, and that a number of periodicals in the Spanish language are published. He places the Spanish-speaking population in Colorado at 50,000, and in New Mexico at 125,000.[1]

Nearly twenty years ago my attention was first attracted to the study of Spanish by the demand then made for "correspondents" capable of answering business letters. Then Spain

[1] *New Mexican Spanish*, "Publications of Modern Language Association," 1906.

Since this paper was written a letter has been received from Professor E. C. Hills, in which he makes the following statement: "In the high schools of Colorado Spanish now holds a place more important than French, but less so than German; and it is being introduced into more schools every year. In our colleges here and on the Pacific coast, we find it necessary to make Spanish very difficult, perhaps the most difficult, modern language work, in order to keep down the number of students. . . . . To the south of us Spanish is the only language spoken for thousands of miles. Even in New Mexico English has gotten a foothold only in a few places, such as Albuquerque, Roswell, *et al.*"

and the Spanish-speaking countries of South America furnished the bulk of the business requiring a knowledge of this language. There was at that time some demand in Mexico and farther south for teachers with normal training who had a working knowledge of Spanish sufficient to enable them to teach in those countries. My first teacher of Spanish was a woman who had done just this work. As Chicago has become more and more the center of large and varied business interests, the demand for Spanish correspondents has increased. The need must be met. There are our interests in Cuba, in the Philippines, in Mexico, to be considered. In the latter country the development of the rubber industry is no small factor in the increasing amount of business communication between the two countries. A larger number of Americans from all parts of the states are not only spending their vacation days sight-seeing, but are becoming interested in a business way in the Latin-American countries and are settling down there. More and more the better class of native tradesmen are sending to the states for articles with which to meet the wants of their customers. In short, the constantly increasing intercourse between these countries and the United States requires that, as a mere business proposition, Spanish be taught for the benefit of our students commercially inclined or intending to enter upon a clerical career.

Here some statistics may help us to understand the relative importance of French and German, the two modern languages generally taught in our high schools, and Spanish. They are taken from a book entitled *Spanish Commercial Practice* connected with the export and import trade to and from Spain, the Spanish colonies, and the countries where Spanish is the recognized language of commerce, by James Graham, secretary for higher education, city of Leeds, England (published by the Macmillan Co.). French is spoken by a total of 45,000,000 people, German, by 80,000,000, 10,000,000 of whom are in the United States. Spanish is the language of 50,000,000, to be found in Spain, northern Africa, Mexico, Central America, South America (except Brazil), West Indies, and the Philippines. The Spanish-speaking peoples occupy territory the total

area of which is second only to that occupied by English-speaking peoples.

The *World Almanac* gives as the total value of all imports into the United States in 1906, $1,226,563,843, of which $214,303,208 came from Spain, Mexico, South America, and Central America. The exports from the United States were $1,717,953,382, of which $181,245,180 went to the countries just mentioned.

Considering the amount of business indicated by these figures, it should not seem strange that young men and women now engaged in clerical work in downtown offices are taking up the study of this language. The subject is now offered in the Chicago night schools. Within the last few years some have taken advantage of these courses and have obtained sufficient command of the language to enable them to take care of the Spanish-correspondence of their firms, and in consequence have found themselves in receipt of larger salaries.

The programmes filed in the office of the superintendent of the Chicago public schools the first week in December, 1907, show that Spanish is taught in three day high schools, with a total enrolment in these classes of ninety-nine; it is taught in three night high schools, with a total enrolment in these classes of fifty. The classes have, in the Normal Extension Department (for the teachers in the city schools), a total enrolment of forty-three.

Inquiries made in this city disclosed some interesting facts: (1) There are comparatively few people actually employed in the offices who can do the work in Spanish, and they are well paid; (2) there are but few interpreters—in some cases these are native Mexicans who can use the English for conversation purposes but find the written English more difficult; (3) that there is a steadily increasing demand for this kind of work, and good returns.

Hon. Elihu Root, secretary of state, has an article entitled "South America—Our Opportunity" in *System*, January, 1907. "Certain practical things," he says, "must be done. Both for the purpose of learning what the South American people want and of

securing their attention to your goods you must have agents who speak the Spanish or Portuguese language." An interpreter is not so successful, neither can the North American succeed through the interpreter in establishing the "agreeable personal relation which is so potent in leading to business relations."

But it is contended that Spain has never taken the prominent part in the history of civilization that Germany or France has; she has no such mass of literature; has tried no great educational experiments; has not delved so deeply into the secrets of science. Part of this may be admitted; and, were you to read an article by E. Gomez de Baquero, "La España Moderna," translated for the *Living Age* in 1901, you would easily be discouraged in your efforts to find any Spanish literature "worth while." He says that French is the language most generally known among their educated people; that they are dominated by certain foreign influences, but he has a hopeful note, for the "period of literary production coincides with moments of political and social fermentation, with the struggle for ideas."

Recent developments have shown that his hope was not without foundation. *Aldea Perdida* (Palacio Valdés) has been called a "real poem in epic tones," into which are introduced customs, scenery, local characters. Señor Henrich, a Spanish publisher, has undertaken a *Biblioteca de Novelistas del Siglo XX*, a collection of tales which "show the direction of ideas and the amount of artistic independence prevalent among the youth of Spain," at the present time. The labor problem, a "feeling for nature in a form novel among Spaniards," a revived interest in the study of Cervantes and in the representative works of their earlier literature, the relations between America and Spain, the political temper of the times, the inner life of a university are topics which have found their way into the current literature of Spain. Recently many charming stories of Spanish life and manners have been published in a form both handy and inexpensive for schoolroom use.

Spanish America has also done its share of work in the literary field. In Mexico in the sixteenth century the printing press was set up, the University of Mexico was opened, and

later, in the same century, a literary contest was held at which a prize was offered for the best poetical work. To the latter part of the sixteenth century belongs the dramatist Alarcón, of Mexico; to the ninetenth century, Bello, born in Venezuela, who became minister to England, and finally rector of the University of Santiago de Chile; although a poet he is best known, perhaps, by his grammar, which is still a standard work.

Brander Matthews, in an article on the Spanish drama in the *International Quarterly,* '03, says:

> The Spanish language is a rich and sonorous language as characteristic of the race that speaks it as is English or French; and in the hands of the dramatic poets Spanish lends itself to the display of an eloquence which only too often sinks into facile grandiloquence. . . . . Formal and pompous [the speakers in the drama] their speech is an occasion, and at other times it is easy and natural, refreshing in its humorous lightness, sparkling with unpremeditated wit, and bristling with pungent proverbs.

These facts and quotations indicate that Spain is waking up in these later years to a new realization of herself and her past, and the great part she played in the exploration and settlement of the New World, and in that older history which extends far back into the days before ever Greece and Rome had reached the zenith of their power.

CLASSIFICATION AND GRADATION

THOMAS B. HUTTON
LeMars, Iowa

The regular method of classifying pupils in grades separated by intervals of one year or a half-year each, requiring all pupils to do a certain amount of work in a given time, regardless of the wide difference of abilities is common in most school systems. But because of the fact that all children have not the same brain capacity, this system has proven to be entirely inadequate, and falls far short of adapting itself to the needs of individual pupils. While many do not wish to depart from the ironclad, lock-step system, at the same time it is agreed among school men that such a system as would establish shorter intervals between grades, so that individual pupils may be transferred from one grade to the next higher without omitting any part of the course, would eliminate the difficulty and make our graded schools more effective.

The semester plan or the division of the course into sixteen parts, as exists in most cities, shortens the intervals between grades to one half-year, but prepares a class for the high-school every half-year, which cannot always be accommodated, or, if accommodated, requires graduation twice a year. The quarterly plan which is a division of the course into thirty-two parts shortens the intervals to nine weeks. The plan of dividing classes until the intervals average about six weeks, making fifty-four classes, is ideal but requires special conditions to operate successfully. Under the two latter plans there must be one of two things—more teachers or more classes for each teacher. But these are excellent systems where buildings are especially large or so located that sixteen teachers in the former plan and twenty-four in the latter may be working upon the same set of pupils; however there are but few places where such a condition exists.

The result in any one-course system which may be devised is that the schools must be graded to suit only the bright pupils, the dull pupils, or the average pupils. Therefore any one-course system falls far short of what it should be, in that it is entirely inadequate for two of these classes or fully half the pupils attending any school. An ideal system would be a number of courses varying in length to suit all abilities, but this of course is impracticable and out of the question. The nearest approach to this would be two parallel courses, articulating with one another in such a way as to come together at different points and thus afford means of transferring back and forth to a slow or rapid rate, as may be necessary. The resultant of this would be in reality several routes or courses varying in length to fit individual cases of different capabilities.

While the eight-year course is most common, it is claimed by many that a course of study should be less than eight years. On the other hand it seems to have been necessary in a number of places to provide a preliminary grade before the first or a preparatory grade following the eighth, in either case making a nine-year course. It has been demonstrated in the short-interval systems that a large number of pupils can complete the work in six years and the conclusion reached is that they should have an opportunity to do the work in six, seven, eight, or nine years, according to their ability. A system that will allow pupils to do the work in from six to nine years, and be so systematized as to be operated with no additional teachers and as a regular graded system, is necessary, and with this end in view the following plan has been in successful operation, in the LeMars public schools the past three years, and the Odebolt public schools the past seven years.

THE TWO-COURSE SYSTEM OF GRADING

Two courses of study are made out covering the same identical work and differing only in the length of time it takes to do any portion of the work. These courses are outlined so as to run parallel and articulate with one another at different points along the line. Classes can be so graded by means of two

courses of study to come together at different periods, allowing pupils at these points to be transferred from one course to the other without loss of any of the work whatever. And in addition the intervals between classes are so correspondingly short as to permit transfers practically at any time. The two courses of study are a six-year course and a nine-year course. This offers the opportunity whereby a pupil may take the full course in six years; by three different routes he may make it in seven years; by three other routes in eight years; and by one route in nine years, and in none of these cases is he required to repeat any part of the course.

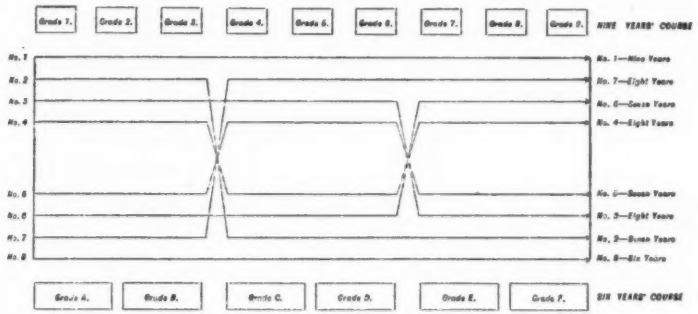

DIAGRAM OF THE TWO-COURSE SYSTEM

The results of the two courses working together is shown in the diagram. The nine-year course is represented by the grades indicated by numbers and the six-year course by the grades indicated by letters. Grades 1 and A begin the primary work together. Grades 3 and B complete this work. Grades 4 and C begin the intermediate work and 6 and D complete the same. Grades 7 and E begin together the grammar work which is completed with 9 and F.

After completing the kindergarten, pupils are divided into two divisions, according to their general ability: the one division being placed in Grade A of the fast or six-year course, and the other division in Grade 1 of the nine-year course.

All pupils do not show the same comparative ability at different ages; for a pupil may be naturally slow during the first

three years of school life, but develop much more rapidly later; in this case he may be transferred from Grade 3 to Grade C. Or, the conditions being reversed he should be transferred from Grade B to Grade 4. That is, at the close of Grade 3, pupils in the nine-year course have completed the same work as the pupils in Grade B of the six-year course and at the same time; the same holding true with pupils in Grades 6 and D, and 9 and F. Hence pupils may be transferred at these points from one course to the other without loss or repetition of any of the work whatever, and continue from that point either at a more rapid rate or at a slower rate, as may be desired.

The lines in the diagram represent the different actual courses as the resultant of the two parallel courses articulating. Course 1 is the regular nine-year course. Course 2 takes a pupil through Grades 1, 2, 3, C, D, E, and F, completing the work in seven years. Course 3 carries pupils through Grades 1 2, 3, 4, 5, 6, E, and F, completing the work in eight years. Course 4 carries one through Grades 1, 2, 3, C, D, 7, 8, and 9 in eight years. Courses 5 and 6 are each seven years in length. Course 7, eight years, and Course 8 is the regular six-year course. Thus out of the two regular courses result eight courses: one six-year course, three seven-year courses, three eight-year courses, and one nine-year course.

At the end of the year we have four kinds of promotions; the "regular" promotion, which is merely promoting a pupil from one grade to the next higher grade in the same course; the "transfer" promotion, which is promoting a pupil from one grade in one course to the next higher grade in the opposite course, as from 6 to E; the "advanced transfer" promotion, which is transferring him to the next higher grade in the opposite course and somewhat beyond his present class, as from 4 to D; the "retarded transfer" promotion, which places him in the opposite course and gives him the benefit of a review before taking up advanced work, but without loss of time, as from 5 to D.

While the "regular" and "transfer" promotions are expected to occur at the end of a year, the "retarded" and "advanced"

transfers may occur at any time during the year as well as at the end of the year, for the points of division brought out in the eight courses are by no means the only opportunities for transfers. This brings up the question of short intervals between classes, and a reference to the following table as an illustration will show that the short interval feature is also an important part of the two-course system.

TABLE OF INTERVALS BETWEEN CLASSES

Between Grades	Time	Interval
4 and C.....	Beginning of year	Zero
4 and C.....	End of third month	4 weeks
4 and C.....	Middle of year	6 weeks
4 and C.....	End of sixth month	8 weeks
4 and C or 5 and C.....	End of year	12 weeks
5 and D or 6 and D.....	Beginning of year	12 weeks
6 and D.....	End of third month	8 weeks
6 and D.....	Middle of year	6 weeks
6 and D.....	End of sixth month	4 weeks
6 and D.....	End of year	Zero

From inspection of the above table, it is noticed that the intervals between classes increase in length until a point is reached where the intervals are twelve weeks, and from that point they begin to decrease. As a result, the intervals between any two consecutive classes throughout the whole course are never more than twelve weeks, and most of the time they are from four to eight weeks. Therefore individual pupils may be given opportunities for short reviews by "retarded transfers," or be placed to the next higher grade by "advanced transfers" any time during the year and with but little effort.

By this provision for individual promotions or transfers the system places each pupil where he properly belongs at all times. and, instead of being compelled to "mark time" waiting for slower ones in his grade, he is permitted to advance as rapidly as his ability will allow. On the other hand those who require more time are given more, and are therefore not pushed into new work until they are thoroughly prepared for it. The strongest argument in favor of this system presents itself when one notes the flexibility of the course and how easily it adapts itself to the varying powers of the child.

The teacher's careful estimate of a pupil's ability to do advanced work determines his promotion. A pupil's promotion is not determined by lapse of time nor by any fixed mark, but by acquired ability to go forward. As soon as the work of a grade becomes too hard or too easy for a pupil he is placed in a grade better suited to his abilities.

By this form of organization the grading of our schools becomes so flexible that the course of study is adapted to the needs of individual pupils. In fact, the pupil is made the center about which the course is constructed. The course is made flexible for the child, not the child made flexible for the course. At the same time system is retained, the course is definitely planned, and no additional teachers are required to do the work.

TWO SIGNIFICANT RESULTS OF THE TWO-COURSE SYSTEM

A school system should be administered from two standpoints; first, and by all odds most important, the standpoint of the child, and second, that of the taxpayer. In reference to the former it will be of interest to note the number of pupils pursuing the work in each course and the number of years required by different pupils to complete the work.

Summarizing the promotions made at the close of last year, we find that 60 per cent. of all the pupils were promoted to the nine-year course and 40 per cent. to the six-year course. Of these, 45 per cent. were transfer promotions.

In connection herewith I desire to show some results of the system where it has been in operation in Odebolt, Iowa, for over six years. At the end of the sixth year there, 54 per cent, of all the pupils in the grades were in the nine-year course and 46 per cent. in the six-year course. Not counting the special promotions made during the school year the total number of promotions made there the last four years were divided as follows:

Regular promotions in the six-year course	34.5%
Regular promotions in the nine-year course	29.3%
Transfer promotions	34.5%
Non-promotions	1.7%

During this entire time, 29 per cent. of the pupils did all their work in the six-year course; 22 per cent. did theirs in the nine-year course, while 49 per cent. worked in both courses.

Judging from the above, this means that, in a school graded to suit the different capabilities of children, 22 per cent., or about one-fourth of the pupils, will require nine years to complete the course, 29 per cent., or say one-fourth, can take the work in six years, and 49 per cent. will require either seven or eight years. While we have no figures at hand it is safe to say that, of this 49 per cent., fully half of them go through in seven years, leaving the other half, or about 25 per cent., to spend eight years. In round numbers, therefore, one-fourth of the pupils can do the work in six years, one-fourth in seven, a fourth in eight, and a fourth in nine years. We ask then whether it is not worth while to break away from the procrustean lock-step method of grading so common in the regular eight-year one-course system when three-fourths of the children attending school are not given the opportunity they are entitled to have.

And now the second standpoint of administration should be considered in the financial saving that the two-course system may be to any district.

From the above conditions the following is worked out. Of the 800 pupils in the LeMars graded schools, under an eight-year one course, practically all of them would spend eight years or longer. Under the two-course system one-fourth, or 200 of them, will require nine years, while a second fourth, or 200 others, will need but seven years, thereby offsetting those requiring nine years. One-fourth, or at least 200 pupils, will need but six years, thereby saving two years of attendance. Therefore every eight years there would be saved the tuition of 200 pupils for two years, which is equivalent to 400 pupils for one year. The tuition of 400 pupils saved in eight years is equal to ⅛ of 400 or 50 pupils every year. This means 50 pupils less to take care of every year. The cost of tuition per pupil has been $18.00 per year, for 50 pupils it would be $900.00 which is the amount saved to this district every year.

From the above it may be seen that any school having had

the two-course system of grading in operation a sufficient time, the enrolment of that school will be decreased 6¼ per cent., thereby decreasing the expense materially.

Hence the two significant results of this system of grading are the benefits derived by pupils of different ability and the saving of expense in conducting the schools.

EDITORIAL NOTES

TWO STANDPOINTS FOR MORAL INSTRUCTION

If we assume that there may be a place in moral education for some intellectual element we have two possibilities. These correspond to the two ways from which we may look at conduct. Conduct is on the one side purpose, motive, and character; on the other side it is action in a world of men and women. Moral instruction may take its cue from either aspect of conduct. It may put itself at the point of view of the boy or girl looking forward to life with vague purposes and unformed character and developing interests; or it may take its stand upon the side of the moral and social order, with its established values and institutions. In the first case it will work sympathetically with the person, and try to discover what is right and good; in the second case it will start with the social and spiritual good which man has built up and show what this does for each person, and what it requires of each member for its maintenance and progress.

THE PERSONAL STANDPOINT

The personal standpoint has been more often chosen by writers on morals. It has seemed more direct in its appeal and better adapted to the immediate end in view. It seems to be the natural outcome of modern civilization which gives the individual increasing scope. In particular it seems to fit into the very nature of moral inquiry which tends to emphasize conscience rather than custom. How often have we heard from preacher and moralist that if we make individuals honest and upright society will be secure.

Further, this method of approach connects directly with certain good tendencies in the average boy and girl, and seeks to organize these into intelligent character. Boys and girls are looking forward to a vocation of some sort; we may teach the moral value of work and the right choice of interests. Boys and girls have a code of honor which approves the generous and brave while it condemns the mean and cowardly; we may bring out the proper relations between self and others, or the kind of courage which is highest and finest. They despise cheating in certain ways; we may show the larger implications of truth and honesty. Many are already keenly sensitive to social standards and anxious to do "right;" we may show them that conscientious conduct has its intellectual side; we may aid them to find a rational standard and thus make them progressive while at the same time we avert some from morbid overscrupulousness. An excellent example of what is meant by this method is given in Ella Lyman Cabot's *Everyday Ethics*.

The standpoint of society's claims and values is presupposed in certain studies already in the curriculum of the high school. We have vaguely believed that one good reason for studying history and political science is that these subjects not only supply information but contribute in some degree to an appreciation of liberty and good government. In the materials selected for study we can recognize the influences of our national life and indeed the broader influence of the eighteenth century in which our national life began. Political and civil liberty was the ideal most prized, and history has meant chiefly political history. The other aspects of society which are now becoming increasingly important have as yet found little place in history and little independent recognition in our curriculum. The studies of political institutions and political history need supplementation from the other fields of society's activities if we are to give the prospective member of society an appreciation of the meaning of social life.

THE STANDPOINT OF SOCIETY

But no study of history or sociology as such would be the moral instruction which is desirable. No one, so far as we know, has attempted to organize for young people the material we have in mind. In fact, although some lines of social ethics were struck out by Plato and Aristotle, and some others by the philosophy of a century ago, still other lines are just being traced by modern investigation.

The central idea in such a study would be the mutual interdependence between society and its members. It would show how and in what degree we owe to society language, science, mastery over nature, art, even personality and self-consciousness itself, as well as the more commonly recognized organization of industry, and the institutions of social, political and family life. Conversely it would show the constant remaking of society for better or for worse by the men and women who compose its membership. Such a study would of course not of itself supply motives for good citizenship; and yet would not the claims of society acquire a certain dignity by the mere fact that these were adjudged to be worth considering? At present business is treated as a means of getting a livelihood. What indication is ever given to the child that it is part of the moral life and an opportunity of contributing to human welfare? It is doubtless true enough that telling children this will not necessarily make them so regard their vocation. But if society never so much as hints in its educational system at such a meaning it is not surprising if few come to such a conviction unaided. To inculcate honesty in business while business itself is considered solely or chiefly as a means for individual "success" is futile and hypocritical. It may give the sort of honesty an exploiter of the public would like to have from his clerks. It will not even suggest the quality which the public most needs today. In fact we might almost say that business, laws, and public opinion will look out for the familiar types of virtues which have been found necessary for maintaining the existing order. What we may set before us as a goal

in moral instruction is rather the suggestion of the higher level which morality needs to seek continually if it would keep up with the new dangers that advancing civilization constantly brings with it.

When society realizes more fully what its real educational possibilities and needs are, we believe it will demand that whether its boys and girls study Latin or geometry or physics is of less importance than whether they study the meaning of the social life into which they are to enter. When the demand is clearly made the subject matter will be organized.

Which of these two standpoints and methods is better? Evidently a good teacher could use either method with success. But on the whole the more objective standpoint of the method which begins from the side of society will, we believe, commend it as most satisfactory for the average teacher. J. H. T.

BOOK REVIEWS

Social Education. By COLIN A. SCOTT. Boston: Ginn & Co. Pp. 300.

For a number of years from various sources we have had fragmentary information regarding the self-organized group work which has been inspired by Dr. Scott in the institutions for training teachers with which he has been connected in Chicago, Wisconsin, Colorado, and Boston. Not until the Social Education Congress of two years ago at Boston and the publication of the quarterly which grew out of this meeting did we have any extended report. The book which Dr. Scott has now written affords us at last an adequate statement of one of the most significant contributions to educational organization and administration that has been made in a number of years.

It is recognized that the school, like the state, must be held together whether subordinate groups hold together or not. These latter "should do nothing which is foreign to the real purpose of the state and the state must necessarily be able to check by force any attempt which would militate against it." However, "true responsibility and even obedience of the highest type is felt only when the group as a whole is free." "The group must be capable of going to pieces, a thing it cannot do if it is to depend on the authoritative backing or the constraint of the teacher. Indeed, it is only when it can go to pieces that there is any reality in the effort to hold it together." "The state is not so much an initiator as an active balance of social forces already in existence, a conception quite different from *laissez faire*." "If children are to be trained socially, they must feel the full effects of social causes—not merely of society at large, but especially of the embryonic society of child life to which they belong. They must study these effects practically, and must see to what extent, as social beings, they are real causes themselves. It is on a basis of experience of this kind that they can best interpret the larger and more complex life of adult society and the state."

It is this conception of increased opportunity for initiative, for responsibility for materials and for less mediated effect of results of undertakings that characterizes the self-organized group work. It makes not only for training in initiative and leadership but through appreciation of these it fosters intelligent obedience.

Three chapters are given to the criticism of (1) Abbotsholme—the monarchy, (2) The George Junior Republic, (3) The School and Society—the "Dewey School." In each case the evaluation is an advance upon those that have been made previously. In discussing the "Dewey School" it is refreshing to get above the plane of superficial criticism and to find a consideration of this most fruitful of educational experiments in terms worthy of it. Perhaps no part of the book, however, will be so much subject to controversy, for Dr. Scott finds the stress in this undertaking to have been upon the organization of a more serviceable course of study and he considers that the ends for which he stands did not function as they should have done in the school. When one takes account of Dr. Dewey's frequent statements on this matter, illustrated by the following sentences from an article on "Democracy in Education," published in

the *Elementary School Teacher*, Vol. IV, No. 4, he wonders whether the condition to which the present author objects was not due to administrative circumstances rather than to any other cause. In this article it is stated, speaking of the learner, "To subject mind to an outside and ready-made material is a denial of the ideal of democracy, which roots itself ultimately in the principle of moral, self-directing individuality." "Until the emphasis changes to the conditions which make it necessary for the child to take an active share in the personal building-up of his own problems and to participate in methods of solving them (even at the expense of experimentation and error) mind is not really freed." But Dr. Scott makes clear his general agreement with Dr. Dewey's philosophy of education. In fact this book is on the whole the best means we have of bringing to teachers in usable form the content of the so-called pragmatist movement.

While discussing these type schools it might have been a help if a chapter had been given to the anarchic school of which we have had an occasional demonstration. The position of those who would give over practically all the school life to individual initiative is frankly met in various sections, but the discussion would be even more effective in a concrete case. Another desired addition is a discussion of the various attempts made by Search and others in the direction of the reducing of mass work, also of such contributions as some of the chapters in Dr. Swift's *Mind in the Making*.

After the chapters referred to, there are two on "self-organized group work." These are very suggestive, dealing with elementary, secondary, and normal school experiments. Among other considerations one values the aid these chapters will afford those who are engaged in working upon the festival problem. One of the most valuable chapters is that on "Reasoning and the teaching of science and arithmetic from a societary standpoint." Of the remaining chapters on "Reading, language and literature;" "Manual arts: industrial and constructive work;" "Fine arts," and "The education of the conscience" the second is the least suggestive. The last is a definite contribution to the moral education problem. All of these chapters can be used to advantage in "method" work because the cases cited are "not ideals and do not call for imitation" and "the question of methods as something peculiar to the outfit of the teacher is absorbed into the larger and more practical problem of community life." We need material of this sort.

Apart from this use in normal school and college classes the book will meet a need in teachers' and parents' meetings, reading circles, etc., and ought to have a wide circulation as a most effective means of helping to bring those who are within and outside the school to a better understanding of some of the possibilities of democratic education.

FRANK A. MANNY

New York City

Homeric Vocabularies. By W. B. OWEN, PH.D., and E. J. GOODSPEED, PH.D. Chicago: The University of Chicago Press, 1906. Pp. viii+62. $0.55.

The avowed purpose of the book is to "help the student to learn Homeric words in a systematic and practical way." With this in view there are given first Greek and then English lists of words with corresponding numbers, the

words being arranged alphabetically in groups according to their frequency of occurrence in Homer, verbs, nouns, pronouns, and other parts of speech being given in order in their appropriate groups.

The general idea of the book seems to me entirely commendable and the book itself well adapted to the purpose of its authors. For the teacher himself, also, it is useful to have in such convenient form lists by which he may know quickly the comparative frequency or infrequency of the occurrence of a given word in order that emphasis may be laid upon it, even though the book be not used by the students. For the sake of convenience both to teacher and student it would have been better, I think, to have Greek and English words placed upon opposite pages instead of arranged in separate halves of the book. Moreover, since the book is primarily for the use of the student, I do not see the purpose of separating words built upon a single root. Simply the fact that φέρτερος occurs more than twenty-five times and the superlative less seems hardly good reason for putting them in different lists. Similarly, words like ἐσθίω and ἔσθω, ναίω and ναι ετάω should be put into juxtaposition.

There are a few errors in the book noted by Mr. Baker in a recent number of the *Classical Review*.

F. L. HUTSON

PRINCETON UNIVERSITY

The Rime of the Ancient Mariner, Christabel, and Other Poems. Edited by JULIAN W. ABERNETHY, PH.D. New York: Charles E. Merrill Co. Pp. 156.

In editing these selections from Coleridge Dr. Abernethy has not erred in undergoing his part of the work. There is a fulness, a plethora of notes, an abundance of criticism, and a complete boxing of a compass of questions. But again we are forced to ask the question: Is the pupil considered? Bearing in mind that the *Ancient Mariner* is usually read in the first or second year of the high-school course, and that the "Christabel," "Dejection," and "France" poems are, for the most part, beyond those years, we can hardly commend Dr. Abernethy for overloading his book with topics and questions far beyond the pupil. Thus we find the editor setting forth such topics as, "The religion of the Ancient Mariner;" "Study the musical quality of the poems and explain its special beauty and variety;" "Nearly every English poet has written finely of the sea: make some comparison;" "A comparison of 'Christabel' with Keat's 'Lamia;'" "An account of Charles Lamb's relations to Coleridge," and "Coleridge's vocabulary, its composition and power." Fine topics no doubt for research, but are they appropriate topics for the youth who is meeting Coleridge for the first time? We are willing, very willing, indeed, to admit that we have enjoyed reading this little book, and that we have gained much information by so doing, but, nevertheless, we doubt if it can be used where it is most likely to be called for—in the first years of the secondary schools. For the teacher this edition will be a pocket variorum of the "Ancient Mariner," replete in suggestions and knowledge.

H. E. COBLENTZ

Milwaukee, Wis.

BOOKS RECEIVED

EDUCATION

Fifty-Third Annual Report of the Board of Education of the City of St. Louis, Mo., for the Year Ending June 30, 1907. St. Louis: Shallcross Printing and Stationery Co., 1908. Pp. 432. Illustrated.

Classified Catalogue of the Carnegie Library of Pittsburgh. 1902–6 Part IV, History and Travel—Collected Biography, Individual Biography. Pittsburgh Carnegie Library, 1908. Pp. 1,583.

The Seventh Yearbook of the National Society for the Scientific Study of Education: Part II, The Co-ordination of the Kindergarten and the Elementary School. (Supplement to *Sixth Yearbook*, Part II.) Chicago: The University of Chicago Press, 1908. Pp. 66. $0.78 postpaid.

First Steps in Organizing Playgrounds. By LEE F. HANMER. New York: Charities Publication Committee, 1908. Pp. 36. Illustrated. $0.10 per single copy, $8.00 per hundred, postpaid.

The Field Day and Play Picnic for Country Children. By MYRON T. SCUDDER. New York: Charities Publication Committee, 1908. Pp. 53. Illustrated. $0.10 per single copy, $8.00 per hundred, postpaid.

The Possibilities of Intellectual Co-operation between North and South America. By L. S. ROWE. *International Conciliation*, No. 6, April, 1908. New York: Association for International Conciliation, 501 W. 116th St. Pp. 15.

America and Japan. By GEORGE TRUMBULL LADD. *International Conciliation*, No. 7, June, 1908. New York: Association for International Conciliation, 501 W. 116th St. Pp. 15.

B. G. Teubner's Verlag auf dem Gebiete der Mathematik, Naturwissenschaften und Technik, nebst Grenzwissenschaften. Leipzig and Berlin: B. G. Teubner, 1908. Pp. cxxxi+392.

The George Leib Harrison Foundation for the Encouragement of Liberal Studies and the Advancement of Knowledge, 1896–1906. Philadelphia: The University of Pennsylvania, 1908. Pp. 119. This book contains an account of the purposes of the Foundation, the conditions of tenure, and a list of holders of fellowships and scholarships on the Foundation, with the publications of each.

ENGLISH

The Aztec God and Other Dramas. By GEORGE LANSING RAYMOND. New York and London: G. P. Putnam's Sons, 1908. Third edition. Pp. 446. $1.25.

A Life in Song. By GEORGE LANSING RAYMOND. New York and London. G. P. Putnam's Sons, 1908. Third edition. Pp. 332. $1.25.

Ballads and Other Poems. By GEORGE LANSING RAYMOND. New York and London: G. P. Putnam's Sons, 1908. Third Edition. Pp. 194+162. $1.25.

Stories New and Old, American and English. Selected, with Introductions, by HAMILTON WRIGHT MABIE. New York: Macmillan, 1908. Pp. 451. $1.50.

Argumentation and Debating. By WILLIAM TRUFANT FOSTER. Boston: Houghton, Mifflin and Co., 1908. Pp. 486. $1.25.

A Chart of English Speech Sounds, with Key-Words and Notes. By DANIEL JONES. New York and London: Oxford University Press, 1908. Pp. 3. Fourpence.

GERMAN

Dictionary of the English and German Languages. Forty-first edition; entirely rewritten and greatly enlarged. By WILLIAM JAMES. New York: The Macmillam Company. Pp. 592. $1.50.

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IRENE WARREN
Librarian, School of Education, The University of Chicago

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[1] Abbreviations used: Ag., August; Amer. Cath. Q., American Catholic Quarterly; Char., Charities; Cath. World, Catholic World; Contemp., Contemporary Review; Educa., Education; Elem. School T., Elementary School Teacher; Fortn., Fortnightly Review; Harp. W., Harper's Weekly; Ind., Independent; Int. Studio, International Studio; Je., June; Jl., July; Journ. of Educa., Journal of Education; Lond., London; n. s., new series; No. Amer., North American Review; Out., Outlook; Pop. Sci. Mo., Popular Science Monthly; Pub. Lib., Public Libraries; R. of R's., Review of Reviews.

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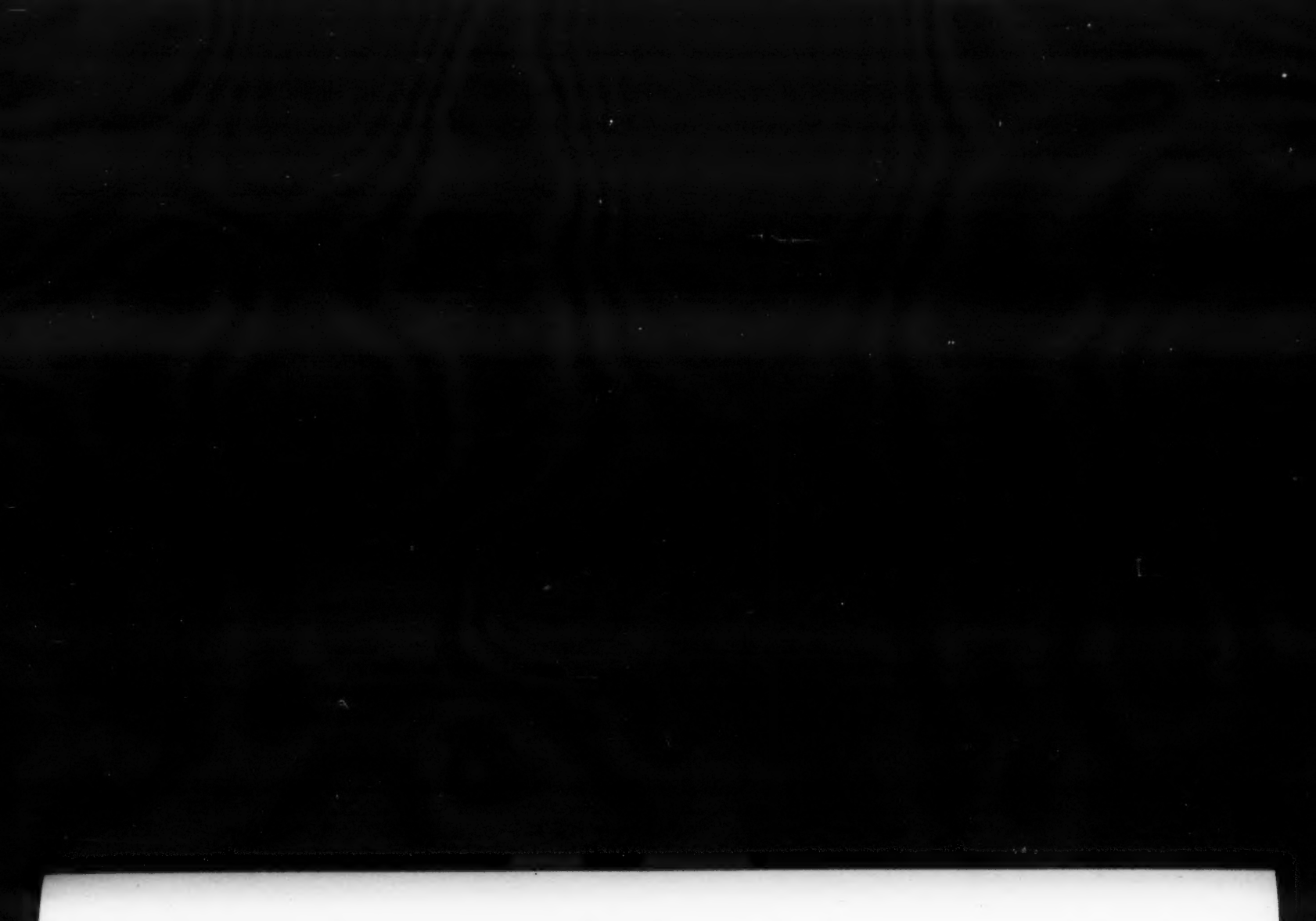
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